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### ABSTRACT

This collection of data resulted from a survey conducted by the Engineers Joint Council for the National Science Foundation in 1969. The sample consisted of 86,438 names taken from a list of approximately 350,000 names of members of engineering societies. After statistical adjustments, the survey sample of 44,837 qualified respondents represented a total survey population of 308,000 individual engineers meeting Engineers Joint Council criteria. (This does not represent a sample of all engineers in the United States.) The questionnaire and specialties list used are reproduced as an appendix. The data are grouped in the following categories: level of highest degree, age, sex, product or service area, bachelor's degree curricula groups, function, type of employer, area of technology, highest degree curricula groups, and geographic location. (TS)

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# AMERICAN ENGINEERING MAN

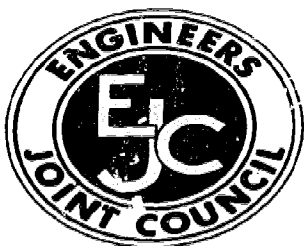
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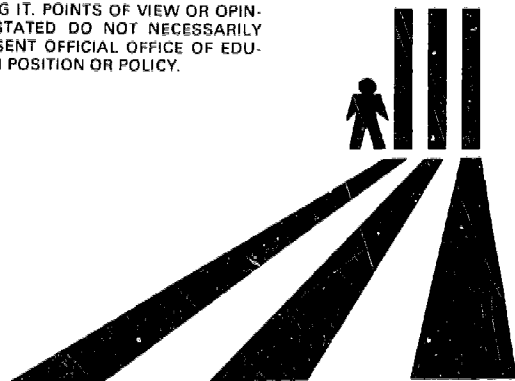
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# N ENGINEERING MANPOWER 1969

STATISTICS FROM THE 1969 NATIONAL ENGINEERS REGISTER

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**The Engineering Manpower Commission**

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**ENGINEERS JOINT COUNCIL**

AMERICAN ENGINEERING MANPOWER 1969  
Statistics from the 1969 National Engineers Register

Based on a Survey Conducted by

ENGINEERS JOINT COUNCIL  
345 East 47th Street  
New York, N.Y. 10017

Under a Contract with the  
NATIONAL SCIENCE FOUNDATION

November 1971



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### Source of Data for the 1969 National Engineers Register Study

NOTE: THE FIGURES IN THIS REPORT DO NOT REPRESENT THE TOTAL NUMBER OF ENGINEERS IN THE UNITED STATES. THEY REPRESENT ONLY THE POPULATION OF ENGINEERING SOCIETY MEMBERS SURVEYED, AS DESCRIBED BELOW.

The National Engineers Register was maintained by Engineers Joint Council from 1964 to 1969 under a contract with the National Science Foundation as part of the National Register of Scientific and Technical Personnel. Major surveys were conducted in 1964, 1967, and 1969. In the 1969 survey EJC was responsible for mailing, collecting, and screening the questionnaires, while NSF provided the statistical procedures, data processing, and tabulation reproduced herein.

The unified mailing list developed by Engineers Joint Council was the primary source of names and addresses. By using this list, which is essentially a combination of engineering society membership lists from which duplicate names have been largely eliminated, NER avoided the tedious procedure of merging samples of names drawn separately from the individual societies in order to identify duplications and establish statistical and mailing controls. Weighting factors computed from earlier studies of multiple membership patterns and variations in the response rate among different societies were applied to give a statistical picture of the entire population being sampled.

The basic sample was drawn by programming the computer to select every fourth name of the 315,205 names on the EJC unified mailing list. This was augmented by a separate sample from the 30,271 names on the American Institute of Aeronautics and Astronautics (AIAA) mailing list not included in the unified list. Questionnaires were mailed to the resulting sample of 86,438 names.

Questionnaires and lists of selected engineering specialities, which had been updated on the basis of experience with the 1964 and 1967 surveys, were mailed by EJC in June to the survey sample. A second mailing was made in August to all those who had not responded by that time. 54,556 responses, not all of which were usable, were received from these two mailings. The basic response rate was therefore about 63%.

The responses were screened by EJC to separate the returns from individuals who did not meet the criteria established for inclusion as engineers, as described below. The need for applying such criteria stemmed from the fact that most engineering societies include among their members many non-engineers, such as scientists and business executives who are involved in related technical fields. For purposes of the 1969 survey, anyone with an engineering degree or holding state registration as a professional engineer was included, even if he indicated that he considered himself a non-engineer. In addition, anyone holding professional-level membership in a society which provides for the acceptance of demonstrated professional competence in lieu of a formal engineering degree, and who regarded himself as an engineer, was also included. This non-engineering degree group consisted mainly of people having degrees in physics, chemistry, or other fields of science plus some with less than a bachelor's degree in terms of formal education but with substantial engineering experience. Non-U.S. citizens were counted if they were working in the United States but excluded if they were residing abroad.

Returns not meeting the criteria for inclusion as engineers, 9,719 in number, were from people who had not been educated as engineers and did not consider themselves engineers, foreign nationals living outside the U.S., deceased persons, duplicates, and those who had omitted key information required for statistical analysis. The remaining questionnaires were carefully screened by EJC for completeness and returned to the respondent for clarification where necessary. Information on the forms was coded by EJC and keypunched by NSF onto cards for computer data processing.

Usable responses were statistically adjusted by NSF to represent an unduplicated number of individual engineers in the participating societies. The statistical procedures took into consideration such factors as effective response rates for each society and the multiple memberships held in these societies. Based upon these procedures, weighting factors were developed for 18 societies separately. The resulting statistical adjustments enabled the 44,837 qualified respondents to represent a total survey population of 308,000 individual engineers meeting EJC criteria and to represent each of the characteristics reported.

The data tables in this publication consist of detailed tabulations and cross-tabulations of the estimated population of 308,000 qualified engineers represented by the survey sample and, in the case of Part II, an estimated population of 37,500 who did not meet the criteria for inclusion as engineers. Note that the numbers in this report do not represent the total United States engineering population. (See warning at beginning of this section.) Because of the membership qualifications of the professional societies, the engineers responding to the survey represent a more qualified, more experienced, and more professionally oriented group than the total engineering population.

Those engineers who do not hold membership in a national professional engineering society are outside the scope of this survey. Since a selected portion of the total engineering population was sampled, the absolute numbers for any variable should not be considered as national totals. Percentage relationships developed from the survey, however, are considered to be representative for the members of engineering societies. The procedures used do not permit estimation of population totals in terms of the individual variables.

The questionnaire and specialties list used for the 1969 National Engineers Register survey are reproduced in the Appendix and should be referred to for help in interpreting the data in this report. No instructions or explanations were given to survey respondents other than those in the questionnaire and specialties list. Each respondent selected the terms that best described himself. Neither EJC nor NSF are able to provide more specific definitions or interpretations of terms used in the survey. The questionnaire included several sections for which data were not computed by NSF, consequently EJC is unable to provide data on characteristics that are not included in the tables in this report.

Highlights of the 1969 National Engineers Register survey were published in A Profile of the Engineering Profession, March 1971, which may be obtained from Engineers Joint Council Department P, 345 East 47th Street, New York, New York 10017 for \$1.00 per copy prepaid.

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# GENERAL CHARACTERISTICS OF ENGINEERS MEETING CRITERIA IN 1969

CHARACTERISTICS	NUMBER	PERCENT
ENGINEERS REPORTING - - - - -	308,000	100
MEN - - - - -	306,900	100
WOMEN - - - - -	1,100	---
EMPLOYMENT STATUS		
FULL-TIME PROFESSIONALLY EMPLOYED - - - - -	289,100	94
PART-TIME PROFESSIONALLY EMPLOYED - - - - -	4,500	1
UNEMPLOYED AND SEEKING EMPLOYMENT - - - - -	2,000	1
NOT EMPLOYED AND NOT SEEKING EMPLOYMENT - - - - -	1,900	1
RETIRED - - - - -	8,900	3
NO REPORT - - - - -	1,600	---
STUDENT STATUS		
FULL-TIME STUDENT - - - - -	2,900	1
PART-TIME STUDENT - - - - -	11,700	4
NO REPORT - - - - -	293,400	95
TYPE OF EMPLOYER		
PRIVATE INDUSTRY OR BUSINESS - - - - -	211,100	68
SELF-EMPLOYED - - - - -	11,400	4
COLLEGE OR UNIVERSITY - - - - -	20,200	6
JUNIOR COLLEGE OR TECHNICAL INSTITUTE - - - - -	900	---
SECONDARY, ELEMENTARY OR OTHER SCHOOL - - - - -	300	---
NONPROFIT ORGANIZATION, OTHER THAN A SCHOOL - - - - -	5,400	2
FEDERAL GOVERNMENT-CIVILIAN EMPLOYEE - - - - -	24,600	8
USPHS, MILITARY SERVICE-ACTIVE DUTY - - - - -	4,900	2
STATE GOVERNMENT - - - - -	5,900	2
LOCAL GOVERNMENT - - - - -	4,800	2
OTHER - - - - -	4,600	1
NOT EMPLOYED - - - - -	12,800	4
NO REPORT - - - - -	1,200	---

# GENERAL CHARACTERISTICS OF ENGINEERS MEETING CRITERIA IN 1969--CONTINUED

## CHARACTERISTICS

NUMBER PERCENT

### EMPLOYMENT FUNCTION

ADVISING, CONSULTATION - - - - -	30,800	10
CONSTRUCTION, INSTALLATION - - - - -	10,300	3
COORDINATION, LIAISON - - - - -	7,700	2
COST ESTIMATING, BUDGETING, PROCUREMENT, PURCHASING - - - - -	5,100	2
DESIGN - - - - -	51,600	17
DEVELOPMENT - - - - -	25,500	8
DRAFTING, DRAWING, GRAPHICS - - - - -	500	---
EXPLORATION - - - - -	2,100	1
INFORMATION AND DATA PROCESSING, OR TECHNICAL WRITING - - - - -	3,400	1
PLANNING, DIRECTING - - - - -	57,600	19
PRODUCTION, OPERATIONS, MAINTENANCE - - - - -	20,500	7
QUALITY ASSURANCE AND CONTROL, RELIABILITY - - - - -	4,700	2
RESEARCH - - - - -	22,000	7
SALES, TECHNICAL SERVICES - - - - -	18,900	6
SPECIFYING - - - - -	1,500	---
TEACHING, INSTRUCTING, TRAINING - - - - -	14,700	5
TESTING, EVALUATION, INSPECTION - - - - -	6,800	2
OTHER - - - - -	6,200	2
NO REPORT - - - - -	17,900	6

### EMPLOYMENT SUPERVISORY RESPONSIBILITY

NO REGULAR SUPERVISION GIVEN - - - - -	52,200	17
INDIRECT OR STAFF SUPERVISION - - - - -	50,400	16
SUPERVISION OF TEAM OR UNIT - - - - -	33,900	11
SUPERVISION OF PROJECT OR SECTION - - - - -	61,700	20
MANAGEMENT OF MAJOR DEPARTMENT, DIVISION, OR PROGRAM - - - - -	56,900	18
GENERAL MANAGEMENT OF ORGANIZATION - - - - -	28,800	9
NO REPORT - - - - -	24,000	8

### YEARS OF PROFESSIONAL EXPERIENCE

1 YEAR OR LESS - - - - -	4,000	1
2-4 - - - - -	23,000	7
5-9 - - - - -	46,800	15
10-14 - - - - -	49,300	16
15-19 - - - - -	51,800	17
20-24 - - - - -	43,700	14
25-29 - - - - -	26,300	8
30-34 - - - - -	21,300	7
35-39 - - - - -	11,400	4
40 OR MORE - - - - -	13,700	4
NO REPORT - - - - -	16,800	5

### HIGHEST DEGREE

DOCTORATE - - - - -	24,500	8
PROFESSIONAL MEDICAL - - - - -	100	---
PROFESSIONAL ENGINEERING - - - - -	13,200	4
MASTER'S - - - - -	71,100	23
BACHELOR'S - - - - -	185,300	60
ASSOCIATE - - - - -	300	---
LESS THAN ASSOCIATE - - - - -	9,100	3
FOREIGN DEGREE, LEVEL UNKNOWN - - - - -	400	---
NO REPORT - - - - -	4,000	1



# GENERAL CHARACTERISTICS OF ENGINEERS MEETING CRITERIA IN 1969--CONTINUED

CHARACTERISTICS	NUMBER	PERCENT
AGE (MEDIAN AGE 42)		
24 OR UNDER - - - - -	5,000	2
25-29 - - - - -	31,400	10
30-34 - - - - -	43,500	14
35-39 - - - - -	44,300	14
40-44 - - - - -	50,400	16
45-49 - - - - -	48,900	16
50-54 - - - - -	31,300	10
55-59 - - - - -	21,400	7
60-64 - - - - -	14,700	5
65-69 - - - - -	7,600	2
70 AND OVER - - - - -	6,600	2
NO REPORT - - - - -	2,800	1
PROFESSIONAL IDENTIFICATION		
ENGINEER - - - - -	254,700	83
ARCHITECT - - - - -	400	---
PHYSICIST - - - - -	1,200	---
CHEMIST - - - - -	1,000	---
GEOLOGIST - - - - -	2,600	1
MATHEMATICAN - - - - -	300	---
METALLURGIST - - - - -	7,400	2
TECHNICIAN - - - - -	600	---
OTHER - - - - -	30,900	10
NO REPORT - - - - -	8,800	3
EMPLOYMENT AREA OF TECHNOLOGY		
BIOMEDICAL GROUP - - - - -	1,600	---
AQUACULTURE - - - - -	---	---
BIOCHEMISTRY - - - - -	100	---
BIOENGINEERING - - - - -	600	---
BIOLOGICAL APPLICATIONS - - - - -	100	---
BIOMECHANICS - - - - -	100	---
BIONICS, MEDICAL ELECTRONICS - - - - -	100	---
HEALTH PHYSICS - - - - -	---	---
INDUSTRIAL HEALTH - - - - -	100	---
LIFE SUPPORT - - - - -	100	---
MEDICAL APPLICATIONS - - - - -	200	---
PHYSIOLOGY - - - - -	---	---
PUBLIC HEALTH - - - - -	200	---

# GENERAL CHARACTERISTICS OF ENGINEERS MEETING CRITERIA IN 1969--CONTINUED

CHARACTERISTICS	NUMBER	PERCENT
EMPLOYMENT AREA OF TECHNOLOGY--CONTINUED		
BEHAVIORAL AND SOCIAL GROUP - - - - -	4,100	1
ECONOMICS - - - - -	1,800	---
EDUCATIONAL TECHNOLOGY - - - - -	1,900	1
HISTORY (TECHNOLOGICAL) - - - - -	100	---
HUMAN FACTORS - - - - -	300	---
PSYCHOLOGY - - - - -	---	---
CHEMICAL AND MATERIALS GROUP - - - - -	11,700	4
CHEMICAL APPLICATIONS - - - - -	4,500	1
COMBUSTION, FUELS - - - - -	1,000	---
COATING, PLATING, CLADDING - - - - -	400	---
CORROSION - - - - -	400	---
CRYSTALS, CRYSTALLOGRAPHY - - - - -	100	---
ELECTROCHEMISTRY - - - - -	300	---
FILAMENT TECHNOLOGY - - - - -	100	---
FUEL CELLS - - - - -	100	---
MATERIAL APPLICATIONS - - - - -	3,500	1
MATERIAL PROPERTIES - - - - -	1,300	---
THERMOCHEMISTRY - - - - -	100	---
METALLURGICAL GROUP - - - - -	12,100	4
BENEFICIATION, ORE PROCESSING - - - - -	600	---
CASTING - - - - -	400	---
METALLURGY (GENERAL) - - - - -	3,900	1
METALLURGY, EXTRACTIVE - - - - -	1,100	---
METALLURGY, PHYSICAL - - - - -	2,900	1
METALLURGY, POWDER - - - - -	400	---
METALLURGY, PROCESS - - - - -	2,200	1
WELDING - - - - -	600	---
EARTH, ATMOSPHERIC AND MARINE GROUP - - - - -	9,900	3
ATMOSPHERIC SCIENCES, METEOROLOGY - - - - -	100	---
DESALTING - - - - -	100	---
EARTH SCIENCES - - - - -	900	---
GEOCHEMISTRY - - - - -	100	---
GEODESY - - - - -	100	---
GEOLOGY - - - - -	2,400	1
GEOPHYSICS - - - - -	300	---
HYDROGRAPHY - - - - -	---	---
HYDROLOGY - - - - -	1,000	---
MARINE SCIENCES - - - - -	800	---
MINING, SURFACE - - - - -	1,200	---
MINING, UNDERGROUND - - - - -	1,600	---
MINING, UNDERWATER - - - - -	---	---
OCEANOGRAPHY - - - - -	200	---
OFFSHORE OPERATIONS - - - - -	600	---
UNDERWATER TECHNOLOGY - - - - -	200	---

# GENERAL CHARACTERISTICS OF ENGINEERS MEETING CRITERIA IN 1969--CONTINUED

CHARACTERISTICS	NUMBER	PERCENT
EMPLOYMENT AREA OF TECHNOLOGY--CONTINUED		
ENVIRONMENTAL AND STRUCTURAL GROUP - - - - -	33,700	11
AIR POLLUTION - - - - -	900	---
CONCRETE TECHNOLOGY - - - - -	1,300	---
CONSERVATION, RECLAMATION - - - - -	700	---
DRAINAGE, IRRIGATION - - - - -	900	---
ENVIRONMENTAL CONTROL - - - - -	3,300	1
ENVIRONMENTAL FACTORS - - - - -	300	---
NOISE REDUCTION - - - - -	200	---
PHOTOGRAMMETRY - - - - -	100	---
POLLUTION - - - - -	300	---
PUBLIC SAFETY - - - - -	200	---
ROCK MECHANICS - - - - -	200	---
SANITARY ENGINEERING - - - - -	2,800	1
SOILS - - - - -	1,500	---
SOLID WASTE - - - - -	100	---
STRUCTURES - - - - -	12,000	4
SURVEYING, MAPPING TECHNOLOGY - - - - -	900	---
TRAFFIC - - - - -	500	---
TRANSPORTATION - - - - -	3,700	1
WASTE DISPOSAL - - - - -	400	---
WATER POLLUTION - - - - -	800	---
WATER RESOURCES AND SUPPLY - - - - -	2,500	1
ELECTROMAGNETIC GROUP - - - - -	42,800	14
CIRCUITS, NETWORKS - - - - -	1,200	---
COMMUNICATION - - - - -	4,100	1
DIELECTRICS - - - - -	100	---
ELECTRICAL APPLICATIONS - - - - -	3,900	1
ELECTRICAL ENGINEERING - - - - -	15,400	5
ELECTROMAGNETIC RADIATION - - - - -	900	---
ELECTROMECHANICAL TECHNOLOGY - - - - -	1,400	---
ELECTRONIC APPLICATIONS - - - - -	6,800	2
INFRA-RED, RADIOMETRY - - - - -	200	---
INSULATION, ELECTRICAL - - - - -	200	---
MAGNETICS, MAGNETISM - - - - -	400	---
NAVIGATION - - - - -	800	---
PHOTOELECTRICITY - - - - -	100	---
POWER, ELECTRICAL - - - - -	5,000	2
RADIO FREQUENCY COMPATIBILITY - - - - -	100	---
RECORDING - - - - -	100	---
SUPERCONDUCTIVITY - - - - -	-----	---
TELECOMMUNICATIONS - - - - -	2,000	1

# GENERAL CHARACTERISTICS OF ENGINEERS MEETING CRITERIA IN 1969--CONTINUED

CHARACTERISTICS	NUMBER	PERCENT
EMPLOYMENT AREA OF TECHNOLOGY--CONTINUED		
DYNAMICS AND MECHANICS GROUP - - - - -	40,100	13
AERODYNAMICS - - - - -	4,100	1
ASTRODYNAMICS - - - - -	700	---
ENERGY GENERATION AND CONVERSION - - - - -	1,400	---
EXPLOSIVE EFFECTS - - - - -	200	---
FLUID DYNAMICS, FLUID MECHANICS - - - - -	2,400	1
FLUIDICS - - - - -	200	---
FRICTION - - - - -	100	---
GAS DYNAMICS - - - - -	500	---
HIGH PRESSURE - - - - -	100	---
HYDRAULICS - - - - -	2,100	1
HYDRODYNAMICS - - - - -	200	---
KINETICS - - - - -	300	---
LUBRICATION - - - - -	300	---
MAGNETOHYDRODYNAMICS - - - - -	100	---
MASS TRANSFER - - - - -	400	---
MECHANICAL APPLICATIONS, APPLIED MECHANICS - - - - -	3,400	1
MECHANICAL ENGINEERING - - - - -	18,300	6
MECHANICS - - - - -	1,300	---
POWER, MECHANICAL - - - - -	1,300	---
PROPULSION - - - - -	2,600	1
VACUUM TECHNOLOGY - - - - -	200	---
HEAT, LIGHT, AND APPLIED PHYSICS GROUP - - - - -	8,500	3
ACOUSTICS, SONICS - - - - -	600	---
APPLIED PHYSICS - - - - -	600	---
ASTRONOMY AND ASTROPHYSICS - - - - -	100	---
CRYOGENICS - - - - -	500	---
HEAT TRANSFER - - - - -	2,800	1
HIGH TEMPERATURE - - - - -	100	---
HOLOGRAPHY - - - - -	---	---
ILLUMINATION, LIGHTING - - - - -	300	---
INSULATION, THERMAL - - - - -	100	---
OPTICS - - - - -	300	---
PHOTOGRAPHY - - - - -	300	---
PHYSICS - - - - -	500	---
PLASMAS - - - - -	200	---
RADIO ASTRONOMY - - - - -	---	---
SOLID STATE - - - - -	500	---
THERMODYNAMICS - - - - -	1,200	---
THERMOPHYSICS - - - - -	100	---
ULTRASONICS - - - - -	100	---
UNDERWATER ACOUSTICS - - - - -	200	---
NUCLEAR GROUP - - - - -	2,600	1
NUCLEAR ENGINEERING - - - - -	1,500	---
NUCLEONICS - - - - -	200	---
POWER, NUCLEAR - - - - -	800	---
RADIATION SAFETY - - - - -	100	---
RADIOACTIVITY - - - - -	---	---

# GENERAL CHARACTERISTICS OF ENGINEERS MEETING CRITERIA IN 1969--CONTINUED

CHARACTERISTICS	NUMBER	PERCENT
EMPLOYMENT AREA OF TECHNOLOGY--CONTINUED		
ENGINEERING PROCESSES AND APPLICATIONS GROUP - - - - -	32,100	10
ASSEMBLY METHODS - - - - -	300	---
CONTAINERIZING, PACKAGING - - - - -	200	---
DRILLING - - - - -	1,400	---
DRYING - - - - -	200	---
ENGINEERING - - - - -	21,700	7
FASTENING, JOINING - - - - -	200	---
FORMING, SHAPING - - - - -	300	---
MATERIAL HANDLING - - - - -	1,100	---
MILITARY APPLICATIONS - - - - -	2,000	1
MINIATURIZATION - - - - -	-----	---
PRESERVING - - - - -	-----	---
PROCESSES - - - - -	3,400	1
REFINING - - - - -	1,300	---
SIZE REDUCTION - - - - -	100	---
AUTOMATION AND CONTROL GROUP - - - - -	12,400	4
ADAPTIVE SYSTEMS - - - - -	100	---
AUTOMATION, CYBERNETICS - - - - -	500	---
CONTROL (GENERAL) - - - - -	4,200	1
GUIDANCE, STABILITY - - - - -	1,000	---
INSTRUMENTATION - - - - -	5,500	2
MEASUREMENT, METROLOGY - - - - -	500	---
SERVO-MECHANISMS - - - - -	200	---
TELEMETRY - - - - -	300	---
WORK MANAGEMENT AND EVALUATION GROUP - - - - -	56,500	18
ARRANGEMENT - - - - -	100	---
CONFIGURATION CONTROL - - - - -	300	---
COST ENGINEERING - - - - -	2,400	1
EQUIPMENT FACILITIES - - - - -	500	---
FIRE PREVENTION AND PROTECTION - - - - -	800	---
INDUSTRIAL ENGINEERING - - - - -	8,100	3
MAINTAINABILITY, MAINTENANCE - - - - -	2,200	1
MANUFACTURING TECHNOLOGY - - - - -	4,400	1
MOTION AND TIME STUDY - - - - -	-----	---
NONDESTRUCTIVE TESTS - - - - -	200	---
OPERATING PROCEDURES - - - - -	1,000	---
OPERATIONS RESEARCH, SYSTEMS ANALYSIS - - - - -	2,600	1
PLANT AND FACILITIES ENGINEERING - - - - -	6,800	2
PRODUCT ENGINEERING - - - - -	4,900	2
PRODUCTION METHODS - - - - -	1,700	---
PRODUCTION PLANNING AND CONTROL - - - - -	3,300	1
QUALITY ASSURANCE - - - - -	1,200	---
QUALITY CONTROL - - - - -	1,000	---
RADIOGRAPHY, X-RAYS - - - - -	-----	---
RELIABILITY - - - - -	900	---
SAFETY ENGINEERING - - - - -	600	---
SPECIFICATIONS, STANDARDS - - - - -	900	---
SYSTEMS ENGINEERING - - - - -	8,300	3
TESTING-ENVIRONMENTAL, OPERATIONAL - - - - -	1,900	1
TESTING-LABORATORY - - - - -	1,500	---
TOOLING, TOOLS - - - - -	200	---
VALUE ENGINEERING - - - - -	400	---
WORK METHODS AND SIMPLIFICATION - - - - -	300	---

# GENERAL CHARACTERISTICS OF ENGINEERS MEETING CRITERIA IN 1969--CONTINUED

CHARACTERISTICS	NUMBER	PERCENT
EMPLOYMENT AREA OF TECHNOLOGY--CONTINUED		
INFORMATION AND MATHEMATICS GROUP - - - - -	11,500	4
COMPUTER APPLICATIONS - - - - -	5,800	2
DATA PROCESSING - - - - -	1,100	---
DISPLAY - - - - -	400	---
DRAFTING, DRAWING, GRAPHIC TECHNOLOGY - - - - -	800	---
INFORMATION RETRIEVAL - - - - -	200	---
INFORMATION THEORY - - - - -	100	---
LOGIC - - - - -	300	---
MATHEMATICS - - - - -	400	---
NEURAL NETS - - - - -	-----	---
REPROGRAPHY - - - - -	-----	---
STATISTICS - - - - -	200	---
STRESS ANALYSIS - - - - -	1,900	1
OTHER - - - - -	9,700	3
NO REPORT - - - - -	18,700	6
EMPLOYMENT PRODUCT OR SERVICE		
AGRICULTURE AND FOOD - - - - -	4,600	1
AIRCRAFT AND SPACE - - - - -	33,000	11
CERAMICS - - - - -	2,100	1
CHEMICALS AND ALLIED PRODUCTS - - - - -	19,500	6
COMMUNICATIONS - - - - -	7,700	2
COMPUTERS - - - - -	11,000	4
CONSTRUCTION AND CIVIL ENGINEERING - - - - -	45,900	15
EDUCATIONAL AND INFORMATION SERVICES - - - - -	14,600	5
ELECTRICAL EQUIPMENT AND SERVICES - - - - -	19,200	6
ELECTRONIC EQUIPMENT AND SERVICES - - - - -	23,000	7
LABORATORY, SCIENTIFIC, PHOTOGRAPHIC, AND OPTICAL EQUIPMENT - - - - -	2,800	1
MACHINERY AND MECHANICAL EQUIPMENT - - - - -	28,400	9
MARINE TRANSPORTATION - - - - -	4,800	2
MEDICAL AND HEALTH SERVICES - - - - -	1,300	---
METALS, BASIC (EXCEPT MINING) - - - - -	12,600	4
METAL FABRICATED PRODUCTS - - - - -	6,300	2
MINING - - - - -	5,900	2
MOTOR VEHICLE TRANSPORTATION - - - - -	2,500	1
ORDNANCE - - - - -	5,200	2
PETROLEUM - - - - -	15,500	5
RAILWAY AND RAPID TRANSIT - - - - -	1,500	---
UTILITIES - - - - -	14,700	5
OTHER PRODUCTS OR SERVICES - - - - -	11,300	4
NO REPORT - - - - -	15,200	5

# GENERAL CHARACTERISTICS OF ENGINEERS MEETING CRITERIA IN 1969--CONTINUED

CHARACTERISTICS	NUMBER	PERCENT
PROFESSIONAL SOCIETY MEMBERSHIP		
AERONAUTICS AND ASTRONAUTICS (AIAA) - - - - -	32,200	10
AGRICULTURAL (ASAE) - - - - -	6,000	2
AIR POLLUTION CONTROL (APCA) - - - - -	1,800	---
AUDIO (AES) - - - - -	1,200	---
AUTOMOTIVE (SAE) - - - - -	5,000	2
CERAMIC (NICE) - - - - -	700	---
CHEMICAL (AIChE) - - - - -	23,900	8
CIVIL (ASCE) - - - - -	49,600	16
CONCRETE (ACI) - - - - -	4,800	2
CONSULTING (AICE) - - - - -	1,100	---
CORROSION (NACE) - - - - -	1,900	1
COST (AACE) - - - - -	1,300	---
COUNTY (NACE) - - - - -	200	---
EDUCATION (ASFE) - - - - -	12,500	4
ELECTRICAL AND ELECTRONICS (IEEE) - - - - -	67,000	22
FIRE PROTECTION (SFPE) - - - - -	1,100	---
FLUID POWER (FPS) - - - - -	600	---
HEATING, REFRIGERATING, AND AIR-CONDITIONING (ASHRAE)	14,400	5
HISTORY (SHOT) - - - - -	400	---
INDUSTRIAL (AIIE) - - - - -	12,900	4
INSTRUMENT (ISA) - - - - -	11,800	4
ILLUMINATING (IES) - - - - -	1,500	---
IRON AND STEEL (AISE) - - - - -	2,600	1
LUBRICATION (ASLE) - - - - -	500	---
MARINE TECHNOLOGY (MTS) - - - - -	1,200	---
MATERIAL MANAGEMENT (IMMS) - - - - -	300	---
MECHANICAL (ASME) - - - - -	49,300	16
METALS (ASM) - - - - -	18,100	6
MILITARY (SAME) - - - - -	6,600	2
MINING, METALLURGICAL, PETROLEUM (AIME) - - - - -	32,100	10
MOTION PICTURE (SMPTe) - - - - -	400	---
NAVAL ARCHITECTS AND MARINE (SNAME) - - - - -	4,600	1
NAVAL ENGINEERS (ASNE) - - - - -	1,800	---
NAVAL SHIP SYSTEMS COMMAND (ASE) - - - - -	400	---
NONDESTRUCTIVE TESTING (ASNT) - - - - -	900	---
NUCLEAR (ANS) - - - - -	2,600	1
PACKAGING & HANDLING (SPHF) - - - - -	100	---
PACKAGING HANDLING AND LOGISTICS (NIPHL) - - - - -	-----	---
PHOTOGRAMMETRY (ASP) - - - - -	600	---
PHOTOGRAPHIC (SPSE) - - - - -	400	---
PHOTO-OPTICAL INSTRUMENTATION (SPIE) - - - - -	500	---
PLANT (AIPE) - - - - -	2,600	1
PLASTICS (SPE) - - - - -	1,000	---
POWER (NAPE) - - - - -	500	---
PROFESSIONAL (NSPE) - - - - -	31,900	10
PULP AND PAPER (TAPPI) - - - - -	1,400	---
QUALITY CONTROL (ASQC) - - - - -	2,000	1

## GENERAL CHARACTERISTICS OF ENGINEERS MEETING CRITERIA IN 1969--CONTINUED

CHARACTERISTICS		NUMBER	PERCENT
PROFESSIONAL SOCIETY MEMBERSHIP--CONTINUED			
RAILWAY (AREA)	- - - - -	700	---
REPRODUCTION (SRE)	- - - - -	100	---
SAFETY (ASSE)	- - - - -	400	---
SANITARY (ASSF)	- - - - -	400	---
STANDARDS (SES)	- - - - -	100	---
STRESS ANALYSIS (SESA)	- - - - -	2,700	1
TRAFFIC (ITE)	- - - - -	1,000	---
TESTING AND MATERIALS (ASTM)	- - - - -	6,000	2
TOOL AND MANUFACTURING (ASTME)	- - - - -	2,400	1
VALUE (SAVE)	- - - - -	500	---
WATER POLLUTION CONTROL (WPCF)	- - - - -	4,200	1
WATER WORKS (AWWA)	- - - - -	4,500	1
WELDING (AWS)	- - - - -	2,800	1
WELL LOG ANALYSTS (SPWLA)	- - - - -	400	---
WOMEN (SWE)	- - - - -	700	---
OTHER	- - - - -	48,800	16
NONE	- - - - -	5,600	2
NO REPORT	- - - - -	8,400	3
TOTAL REPORTING	- - - - -	294,000	95
REPORTING MORE THAN ONE SOCIETY	- - - - -	129,900	42
WORK SPONSORED			
AGRICULTURE	- - - - -	4,100	3
ATOMIC ENERGY	- - - - -	12,800	10
DEFENSE	- - - - -	68,200	53
EDUCATION	- - - - -	8,700	7
HEALTH	- - - - -	8,200	6
HOUSING	- - - - -	5,200	4
INTERNATIONAL	- - - - -	3,000	2
NATURAL RESOURCES	- - - - -	8,900	7
PUBLIC WORKS	- - - - -	15,500	12
RURAL DEVELOPMENT	- - - - -	1,900	1
SPACE	- - - - -	27,800	22
TRANSPORTATION	- - - - -	17,200	13
URBAN DEVELOPMENT	- - - - -	5,300	4
OTHER PROGRAM	- - - - -	8,700	7
REPORTING MORE THAN ONE PROGRAM	- - - - -	39,700	31
TOTAL REPORTING	- - - - -	128,200	
NO SUPPORT	- - - - -	154,600	
SUPPORT STATUS UNKNOWN	- - - - -	8,400	
NO REPORT	- - - - -	16,800	

NOTE - PERCENTS DO NOT ADD TO TOTAL BECAUSE OF RESPONSES INDICATING MULTIPLE SOURCES OF SUPPORT.



## GENERAL CHARACTERISTICS OF ENGINEERS MEETING CRITERIA IN 1969--CONTINUED

CHARACTERISTICS	NUMBER	PERCENT
GREATEST AREA OF TECHNOLOGY		
BIOMEDICAL GROUP - - - - -	1,700	---
AQUACULTURE - - - - -	---	---
BIOCHEMISTRY - - - - -	100	---
BIOENGINEERING - - - - -	700	---
BIOLOGICAL APPLICATIONS - - - - -	100	---
BIOMECHANICS - - - - -	100	---
BIONICS, MEDICAL ELECTRONICS - - - - -	100	---
HEALTH PHYSICS - - - - -	---	---
INDUSTRIAL HEALTH - - - - -	100	---
LIFE SUPPORT - - - - -	100	---
MEDICAL APPLICATIONS - - - - -	200	---
PHYSIOLOGY - - - - -	---	---
PUBLIC HEALTH - - - - -	200	---
BEHAVIORAL AND SOCIAL GROUP - - - - -	3,600	1
ECONOMICS - - - - -	1,600	---
EDUCATIONAL TECHNOLOGY - - - - -	1,600	---
HISTORY (TECHNOLOGICAL) - - - - -	100	---
HUMAN FACTORS - - - - -	300	---
PSYCHOLOGY - - - - -	---	---
CHEMICAL AND MATERIALS GROUP - - - - -	11,400	4
CHEMICAL APPLICATIONS - - - - -	4,400	1
COMBUSTION, FUELS - - - - -	1,000	---
COATING, PLATING, CLADDING - - - - -	300	---
CORROSION - - - - -	400	---
CRYSTALS, CRYSTALLOGRAPHY - - - - -	100	---
ELECTROCHEMISTRY - - - - -	300	---
FILAMENT TECHNOLOGY - - - - -	200	---
FUEL CELLS - - - - -	---	---
MATERIAL APPLICATIONS - - - - -	3,300	1
MATERIAL PROPERTIES - - - - -	1,300	---
THERMOCHEMISTRY - - - - -	100	---
METALLURGICAL GROUP - - - - -	12,600	4
BENEFICIATION, ORE PROCESSING - - - - -	600	---
CASTING - - - - -	400	---
METALLURGY (GENERAL) - - - - -	4,100	1
METALLURGY, EXTRACTIVE - - - - -	1,200	---
METALLURGY, PHYSICAL - - - - -	3,100	1
METALLURGY, POWDER - - - - -	400	---
METALLURGY, PROCESS - - - - -	2,300	1
WELDING - - - - -	500	---

## GENERAL CHARACTERISTICS OF ENGINEERS MEETING CRITERIA IN 1969--CONTINUED

CHARACTERISTICS	NUMBER	PERCENT
GREATEST AREA OF TECHNOLOGY--CONTINUED		
EARTH, ATMOSPHERIC AND MARINE GROUP - - - - -	10,400	3
ATMOSPHERIC SCIENCES, METEOROLOGY - - - - -	100	---
DESALTING - - - - -	100	---
EARTH SCIENCES - - - - -	1,000	---
GEOCHEMISTRY - - - - -	100	---
GEODESY - - - - -	100	---
GEOLOGY - - - - -	2,700	1
GEOFYSICS - - - - -	300	---
HYDROGRAPHY - - - - -	---	---
HYDROLOGY - - - - -	1,000	---
MARINE SCIENCES - - - - -	900	---
MINING, SURFACE - - - - -	1,200	---
MINING, UNDERGROUND - - - - -	1,800	---
MINING, UNDERWATER - - - - -	---	---
OCEANOGRAPHY - - - - -	200	---
OFFSHORE OPERATIONS - - - - -	500	---
UNDERWATER TECHNOLOGY - - - - -	200	---
ENVIRONMENTAL AND STRUCTURAL GROUP - - - - -	34,500	11
AIR POLLUTION - - - - -	700	---
CONCRETE TECHNOLOGY - - - - -	1,400	---
CONSERVATION, RECLAMATION - - - - -	600	---
DRAINAGE, IRRIGATION - - - - -	900	---
ENVIRONMENTAL CONTROL - - - - -	3,300	1
ENVIRONMENTAL FACTORS - - - - -	300	---
NOISE REDUCTION - - - - -	100	---
PHOTOGRAMMETRY - - - - -	100	---
POLLUTION - - - - -	200	---
PUBLIC SAFETY - - - - -	200	---
ROCK MECHANICS - - - - -	200	---
SANITARY ENGINEERING - - - - -	2,800	1
SOILS - - - - -	1,700	---
SOLID WASTE - - - - -	100	---
STRUCTURES - - - - -	13,100	4
SURVEYING, MAPPING TECHNOLOGY - - - - -	900	---
TRAFFIC - - - - -	500	---
TRANSPORTATION - - - - -	3,600	1
WASTE DISPOSAL - - - - -	400	---
WATER POLLUTION - - - - -	800	---
WATER RESOURCES AND SUPPLY - - - - -	2,700	1
ELECTROMAGNETIC GROUP - - - - -	43,200	14
CIRCUITS, NETWORKS - - - - -	1,300	---
COMMUNICATION - - - - -	4,000	1
DIELECTRICS - - - - -	100	---
ELECTRICAL APPLICATIONS - - - - -	4,000	1
ELECTRICAL ENGINEERING - - - - -	15,800	5
ELECTROMAGNETIC RADIATION - - - - -	900	---
ELECTROMECHANICAL TECHNOLOGY - - - - -	1,400	---
ELECTRONIC APPLICATIONS - - - - -	6,700	2
INFRA-RED, RADIOMETRY - - - - -	200	---
INSULATION, ELECTRICAL - - - - -	300	---
MAGNETICS, MAGNETISM - - - - -	400	---
NAVIGATION - - - - -	800	---
PHOTOELECTRICITY - - - - -	100	---
POWER, ELECTRICAL - - - - -	4,900	2
RADIO FREQUENCY COMPATIBILITY - - - - -	100	---
RECORDING - - - - -	100	---
SUPERCONDUCTIVITY - - - - -	---	---
TELECOMMUNICATIONS - - - - -	2,000	1

## GENERAL CHARACTERISTICS OF ENGINEERS MEETING CRITERIA IN 1969--CONTINUED

CHARACTERISTICS	NUMBER	PERCENT
GREATEST AREA OF TECHNOLOGY--CONTINUED		
DYNAMICS AND MECHANICS GROUP - - - - -	42,100	14
AERODYNAMICS - - - - -	4,100	1
ASTRODYNAMICS - - - - -	700	---
ENERGY GENERATION AND CONVERSION - - - - -	1,400	---
EXPLOSIVE EFFECTS - - - - -	200	---
FLUID DYNAMICS, FLUID MECHANICS - - - - -	2,700	1
FLUIDICS - - - - -	100	---
FRICTION - - - - -	100	---
GAS DYNAMICS - - - - -	600	---
HIGH PRESSURE - - - - -	100	---
HYDRAULICS - - - - -	2,200	1
HYDRODYNAMICS - - - - -	300	---
KINETICS - - - - -	400	---
LUBRICATION - - - - -	300	---
MAGNETOHYDRODYNAMICS - - - - -	100	---
MASS TRANSFER - - - - -	400	---
MECHANICAL APPLICATIONS, APPLIED MECHANICS - - - - -	3,700	1
MECHANICAL ENGINEERING - - - - -	19,100	6
MECHANICS - - - - -	1,400	---
POWER, MECHANICAL - - - - -	1,400	---
PROPULSION - - - - -	2,600	1
VACUUM TECHNOLOGY - - - - -	200	---
HEAT, LIGHT, AND APPLIED PHYSICS GROUP - - - - -	8,400	3
ACOUSTICS, SONICS - - - - -	500	---
APPLIED PHYSICS - - - - -	600	---
ASTRONOMY AND ASTROPHYSICS - - - - -	100	---
CRYOGENICS - - - - -	400	---
HEAT TRANSFER - - - - -	2,900	1
HIGH TEMPERATURE - - - - -	100	---
HOLOGRAPHY - - - - -	---	---
ILLUMINATION, LIGHTING - - - - -	300	---
INSULATION, THERMAL - - - - -	200	---
OPTICS - - - - -	300	---
PHOTOGRAPHY - - - - -	300	---
PHYSICS - - - - -	500	---
PLASMAS - - - - -	200	---
RADIO ASTRONOMY - - - - -	---	---
SOLID STATE - - - - -	500	---
THERMODYNAMICS - - - - -	1,300	---
THERMOPHYSICS - - - - -	100	---
ULTRASONICS - - - - -	---	---
UNDERWATER ACOUSTICS - - - - -	200	---

## GENERAL CHARACTERISTICS OF ENGINEERS MEETING CRITERIA IN 1969--CONTINUED

CHARACTERISTICS	NUMBER	PERCENT
GREATEST AREA OF TECHNOLOGY--CONTINUED		
NUCLEAR GROUP - - - - -	2,400	1
NUCLEAR ENGINEERING - - - - -	1,500	---
NUCLEONICS - - - - -	200	---
POWER, NUCLEAR - - - - -	700	---
RADIATION SAFETY - - - - -	---	---
RADIOACTIVITY - - - - -	100	---
ENGINEERING PROCESSES AND APPLICATIONS GROUP - - - - -	32,100	10
ASSEMBLY METHODS - - - - -	200	---
CONTAINERIZING, PACKAGING - - - - -	200	---
DRILLING - - - - -	1,400	---
DRYING - - - - -	200	---
ENGINEERING - - - - -	22,200	7
FASTENING, JOINING - - - - -	100	---
FORMING, SHAPING - - - - -	200	---
MATERIAL HANDLING - - - - -	900	---
MILITARY APPLICATIONS - - - - -	1,700	---
MINIATURIZATION - - - - -	---	---
PRESERVING - - - - -	---	---
PROCESSES - - - - -	3,600	1
REFINING - - - - -	1,200	---
SIZE REDUCTION - - - - -	---	---
AUTOMATION AND CONTROL GROUP - - - - -	12,300	4
ADAPTIVE SYSTEMS - - - - -	100	---
AUTOMATION, CYBERNETICS - - - - -	500	---
CONTROL (GENERAL) - - - - -	4,100	1
GUIDANCE, STABILITY - - - - -	900	---
INSTRUMENTATION - - - - -	5,400	2
MEASUREMENT, METROLOGY - - - - -	500	---
SERVO-MECHANISMS - - - - -	300	---
TELEMETRY - - - - -	300	---
WORK MANAGEMENT AND EVALUATION GROUP - - - - -	53,900	18
ARRANGEMENT - - - - -	100	---
CONFIGURATION CONTROL - - - - -	200	---
COST ENGINEERING - - - - -	2,200	1
EQUIPMENT FACILITIES - - - - -	400	---
FIRE PREVENTION AND PROTECTION - - - - -	700	---
INDUSTRIAL ENGINEERING - - - - -	8,100	3
MAINTAINABILITY, MAINTENANCE - - - - -	2,000	1
MANUFACTURING TECHNOLOGY - - - - -	4,300	1
MOTION AND TIME STUDY - - - - -	100	---
NONDESTRUCTIVE TESTS - - - - -	200	---
OPERATING PROCEDURES - - - - -	900	---
OPERATIONS RESEARCH, SYSTEMS ANALYSIS - - - - -	2,500	1
PLANT AND FACILITIES ENGINEERING - - - - -	6,500	2
PRODUCT ENGINEERING - - - - -	4,800	2
PRODUCTION METHODS - - - - -	1,700	---
PRODUCTION PLANNING AND CONTROL - - - - -	3,200	1
QUALITY ASSURANCE - - - - -	900	---

## GENERAL CHARACTERISTICS OF ENGINEERS MEETING CRITERIA IN 1969--CONTINUED

CHARACTERISTICS	NUMBER	PERCENT
GREATEST AREA OF TECHNOLOGY--CONTINUED		
QUALITY CONTROL - - - - -	900	---
RADIOGRAPHY, X-RAYS - - - - -	-----	---
RELIABILITY - - - - -	700	---
SAFETY ENGINEERING - - - - -	500	---
SPECIFICATIONS, STANDARDS - - - - -	700	---
SYSTEMS ENGINEERING - - - - -	8,200	3
TESTING-ENVIRONMENTAL, OPERATIONAL - - - - -	1,800	---
TESTING-LABORATORY - - - - -	1,300	---
TOOLING, TOOLS - - - - -	200	---
VALUE ENGINEERING - - - - -	300	---
WORK METHODS AND SIMPLIFICATION - - - - -	300	---
INFORMATION AND MATHEMATICS GROUP - - - - -	10,600	3
COMPUTER APPLICATIONS - - - - -	5,200	2
DATA PROCESSING - - - - -	1,000	---
DISPLAY - - - - -	400	---
DRAFTING, DRAWING, GRAPHIC TECHNOLOGY - - - - -	700	---
INFORMATION RETRIEVAL - - - - -	200	---
INFORMATION THEORY - - - - -	100	---
LOGIC - - - - -	300	---
MATHEMATICS - - - - -	400	---
NEURAL NETS - - - - -	-----	---
REPROGRAPHY - - - - -	-----	---
STATISTICS - - - - -	200	---
STRESS ANALYSIS - - - - -	2,000	1
OTHER - - - - -	9,000	3
NO REPORT - - - - -	19,800	6
REGISTERED ENGINEERS		
YES - - - - -	131,100	42
NUMBER OF STATES		
1 - - - - -	101,500	33
2 - - - - -	16,800	5
3 - - - - -	4,900	2
4 - - - - -	2,200	1
5 - - - - -	1,000	---
6 - - - - -	800	---
7 - - - - -	500	---
8 - - - - -	500	---
9 - - - - -	200	---
10 OR MORE - - - - -	600	---
NO REPORT OF NUMBER OF STATES - - - - -	2,000	1
NO - - - - -	171,400	56
NO REPORT - - - - -	5,400	2

NOTE - GROUPS OR PERCENTS MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.

SOURCE - NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969.

# GEOGRAPHIC LOCATIONS OF ENGINEERS MEETING CRITERIA IN 1969

GEOGRAPHIC LOCATION	NUMBER	PERCENT
ALL LOCATIONS - - - - -	308,000	100
NEW ENGLAND - - - - -	21,800	7
CONNECTICUT - - - - -	6,600	2
MAINE - - - - -	700	---
MASSACHUSETTS - - - - -	12,300	4
NEW HAMPSHIRE - - - - -	900	---
RHODE ISLAND - - - - -	1,000	---
VERMONT - - - - -	500	---
MIDDLE ATLANTIC - - - - -	66,400	22
NEW JERSEY - - - - -	14,500	5
NEW YORK - - - - -	29,200	9
PENNSYLVANIA - - - - -	22,700	7
EAST NORTH CENTRAL - - - - -	52,200	17
ILLINOIS - - - - -	14,800	5
INDIANA - - - - -	5,800	2
MICHIGAN - - - - -	9,200	3
OHIO - - - - -	17,500	6
WISCONSIN - - - - -	5,000	2
WEST NORTH CENTRAL - - - - -	18,500	6
IOWA - - - - -	2,800	1
KANSAS - - - - -	2,000	1
MINNESOTA - - - - -	4,600	1
MISSOURI - - - - -	7,000	2
NEBRASKA - - - - -	1,500	---
NORTH DAKOTA - - - - -	300	---
SOUTH DAKOTA - - - - -	400	---
SOUTH ATLANTIC - - - - -	39,300	13
DELAWARE - - - - -	2,100	1
DISTRICT OF COLUMBIA - - - - -	5,900	2
FLORIDA - - - - -	6,700	2
GEORGIA - - - - -	3,100	1
MARYLAND - - - - -	7,600	2
NORTH CAROLINA - - - - -	3,700	1
SOUTH CAROLINA - - - - -	2,000	1
VIRGINIA - - - - -	6,300	2
WEST VIRGINIA - - - - -	2,000	1

## GEOGRAPHIC LOCATIONS OF ENGINEERS MEETING CRITERIA IN 1969

GEOGRAPHIC LOCATION--CONTINUED	NUMBER	PERCENT
EAST SOUTH CENTRAL - - - - -	11,900	4
ALABAMA - - - - -	4,000	1
KENTUCKY - - - - -	1,900	1
MISSISSIPPI - - - - -	1,200	---
TENNESSEE - - - - -	4,800	2
WEST SOUTH CENTRAL - - - - -	29,500	10
ARKANSAS - - - - -	900	---
LOUISIANA - - - - -	5,100	2
OKLAHOMA - - - - -	4,300	1
TEXAS - - - - -	19,200	6
MOUNTAIN - - - - -	14,800	5
ARIZONA - - - - -	3,100	1
COLORADO - - - - -	4,800	2
IDAHO - - - - -	900	---
MONTANA - - - - -	800	---
NEVADA - - - - -	900	---
NEW MEXICO - - - - -	2,000	1
UTAH - - - - -	1,600	---
WYOMING - - - - -	500	---
PACIFIC - - - - -	50,700	16
ALASKA - - - - -	600	---
CALIFORNIA - - - - -	41,400	13
HAWAII - - - - -	1,000	---
OREGON - - - - -	1,700	---
WASHINGTON - - - - -	6,000	2
U.S. TERRITORIES AND POSSESSIONS - - - - -	500	---
CANAL ZONE - - - - -	-----	---
GUAM - - - - -	-----	---
PUERTO RICO - - - - -	500	---
VIRGIN ISLANDS - - - - -	-----	---
FOREIGN - - - - -	2,200	1

NOTE - GROUPS OR PERCENTS MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.

SOURCE - NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969.

## NUMBER OF ENGINEERS MEETING CRITERIA BY CURRICULUM

CURRICULUM OF HIGHEST DEGREE	TOTAL	PROFESSIONAL ENGINEERING		
		DOCTORATE	PROFESSIONAL MEDICAL	PROFESSIONAL ENGINEERING
ALL CURRICULA - - - - -	308,000	24,500	100	13,200
AERONAUTICAL AND ASTRONAUTICAL	13,100	1,300	-----	400
AGRICULTURAL	4,700	400	-----	-----
ARCHITECTURAL	1,300	-----	-----	-----
BIOENGINEERING	400	100	-----	-----
CERAMIC	500	100	-----	-----
CHEMICAL	26,600	4,200	-----	700
CIVIL	43,600	2,100	-----	2,100
COMMUNICATIONS	1,600	100	-----	100
CONSTRUCTION	600	-----	-----	100
ELECTRICAL	47,200	2,000	-----	2,400
ELECTRONIC	16,800	700	-----	400
ENGINEERING MECHANICS	4,700	1,500	-----	100
ENGINEERING GENERAL	4,900	200	-----	500
ENGINEERING PHYSICS	1,700	300	-----	-----
ENGINEERING SCIENCE	2,100	400	-----	-----
ENGINEERING TECHNOLOGY	800	-----	-----	100
ENVIRONMENTAL	600	100	-----	-----
GEOLOGICAL	4,200	600	-----	200
GEOPHYSICAL	300	100	-----	-----
INDUSTRIAL	11,300	500	-----	300
MARINE	1,300	-----	-----	-----
MATERIALS	900	400	-----	-----
MECHANICAL	57,200	2,700	-----	2,800
METALLURGICAL	12,800	2,500	-----	700
MINERAL	400	-----	-----	-----
MINING	4,200	100	-----	900
NAVAL ARCHITECTURE	1,300	-----	-----	100
NUCLEAR	700	200	-----	-----
PETROLEUM	6,400	200	-----	400
SANITARY	1,900	300	-----	100
TEXTILE	200	-----	-----	-----
TRANSPORTATION	600	100	-----	100
WELDING	100	-----	-----	-----
OTHER ENGINEERING	6,400	600	-----	300
BUSINESS ADMINISTRATION	7,300	100	-----	-----
CHEMISTRY	1,700	500	-----	-----
PHYSICS	4,100	600	-----	-----
OTHER NONENGINEERING	7,000	1,200	100	-----
NO REPORT	6,800	-----	-----	200

NOTE - GROUPS MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.

SOURCE - NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969.



NUMBER OF ENGINEERS MEETING CRITERIA BY CURRICULUM AND HIGHEST DEGREE, 1969

GREE	TOTAL	HIGHEST DEGREE							FOREIGN DEGREE, LEVEL UNKNOWN	NO REPORT
		DOCTORATE	PROFESS- IONAL MEDICAL	PROFESS- IONAL ENGINEER- ING	MASTER'S	BACHE- LOR'S	ASSOCI- ATE	LESS THAN ASSOCI- ATE		
- - -	308,000	24,500	100	13,200	71,100	185,300	300	9,100	400	4,000
ICAL	13,100	1,300	-----	400	4,000	7,100	-----	200	-----	-----
- - -	4,700	400	-----	-----	1,300	2,900	-----	-----	-----	-----
- - -	1,300	-----	-----	-----	200	1,000	-----	100	-----	-----
- - -	400	100	-----	-----	100	200	-----	-----	-----	-----
- - -	500	100	-----	-----	100	300	-----	-----	-----	-----
- - -	26,600	4,200	-----	700	5,700	15,700	-----	200	-----	-----
- - -	43,600	2,100	-----	2,100	7,900	31,000	-----	300	100	-----
- - -	1,600	100	-----	100	500	800	-----	100	-----	-----
- - -	600	-----	-----	100	200	300	-----	-----	-----	-----
- - -	47,200	2,000	-----	2,400	6,800	34,600	100	1,200	100	-----
- - -	16,800	700	-----	400	5,300	9,400	-----	900	-----	-----
- - -	4,700	1,500	-----	100	1,600	1,300	-----	200	-----	-----
- - -	4,900	200	-----	500	600	2,900	-----	700	-----	-----
- - -	1,700	300	-----	-----	300	900	-----	100	-----	-----
- - -	2,100	400	-----	-----	800	700	-----	-----	-----	-----
- - -	800	-----	-----	100	100	400	-----	100	-----	-----
- - -	600	100	-----	-----	200	200	-----	-----	-----	-----
- - -	4,200	600	-----	200	900	2,400	-----	-----	-----	-----
- - -	300	100	-----	-----	100	100	-----	-----	-----	-----
- - -	11,300	500	-----	300	2,600	7,400	-----	500	-----	-----
- - -	1,300	-----	-----	-----	100	1,100	-----	100	-----	-----
- - -	900	400	-----	-----	300	100	-----	-----	-----	-----
- - -	57,200	2,700	-----	2,800	9,500	40,900	-----	1,100	100	-----
- - -	12,800	2,500	-----	700	3,200	6,100	-----	200	-----	-----
- - -	400	-----	-----	-----	200	200	-----	-----	-----	-----
- - -	4,200	100	-----	900	400	2,700	-----	100	-----	-----
- - -	1,300	-----	-----	100	500	600	-----	100	-----	-----
- - -	700	200	-----	-----	500	100	-----	-----	-----	-----
- - -	6,400	200	-----	400	900	4,800	-----	100	-----	-----
- - -	1,900	300	-----	100	1,400	200	-----	-----	-----	-----
- - -	200	-----	-----	-----	-----	200	-----	-----	-----	-----
- - -	600	100	-----	100	300	100	-----	-----	-----	-----
- - -	100	-----	-----	-----	-----	-----	-----	-----	-----	-----
- - -	6,400	600	-----	300	2,800	2,400	-----	300	-----	-----
- - -	7,300	100	-----	-----	6,300	600	-----	200	-----	-----
- - -	1,700	500	-----	-----	300	800	-----	-----	-----	-----
- - -	4,100	600	-----	-----	1,200	2,200	-----	100	-----	-----
- - -	7,000	1,200	100	-----	3,400	2,200	-----	100	-----	-----
- - -	6,800	-----	-----	200	200	400	-----	1,900	-----	4,000

TO TOTAL BECAUSE OF ROUNDING.

OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969.

# GENERAL CHARACTERISTICS OF PROFESSIONAL SOCIETY MEMBERS NOT MEETING CRITERIA IN 1969

CHARACTERISTICS	NUMBER	PERCENT
ENGINEERS REPORTING - - - - -	37,500	100
MEN - - - - -	36,800	98
WOMEN - - - - -	800	2
EMPLOYMENT STATUS		
FULL-TIME PROFESSIONALLY EMPLOYED - - - - -	32,600	87
PART-TIME PROFESSIONALLY EMPLOYED - - - - -	1,000	3
UNEMPLOYED AND SEEKING EMPLOYMENT - - - - -	400	1
NOT EMPLOYED AND NOT SEEKING EMPLOYMENT - - - - -	700	2
RETIRED - - - - -	2,400	6
NO REPORT - - - - -	400	1
STUDENT STATUS		
FULL-TIME STUDENT - - - - -	700	2
PART-TIME STUDENT - - - - -	1,700	4
NO REPORT - - - - -	35,200	94
TYPE OF EMPLOYER		
PRIVATE INDUSTRY OR BUSINESS - - - - -	26,000	69
SELF-EMPLOYED - - - - -	1,500	4
COLLEGE OR UNIVERSITY - - - - -	1,700	4
JUNIOR COLLEGE OR TECHNICAL INSTITUTE - - - - -	400	1
SECONDARY, ELEMENTARY OR OTHER SCHOOL - - - - -	200	---
NONPROFIT ORGANIZATION, OTHER THAN A SCHOOL - - - - -	600	2
FEDERAL GOVERNMENT-CIVILIAN EMPLOYEE - - - - -	2,000	5
USPHS, MILITARY SERVICE-ACTIVE DUTY - - - - -	200	---
STATE GOVERNMENT - - - - -	100	---
LOCAL GOVERNMENT - - - - -	200	---
OTHER - - - - -	600	2
NOT EMPLOYED - - - - -	3,500	9
NO REPORT - - - - -	400	1

GENERAL CHARACTERISTICS OF PROFESSIONAL SOCIETY MEMBERS NOT MEETING CRITERIA IN 1969--CONTINUE

CHARACTERISTICS	NUMBER	PERCENT
AGE (MEDIAN AGE 46)		
24 OR UNDER - - - - -	1,800	5
25-29 - - - - -	2,200	6
30-34 - - - - -	3,300	9
35-39 - - - - -	4,600	12
40-44 - - - - -	5,600	15
45-49 - - - - -	5,500	15
50-54 - - - - -	5,100	14
55-59 - - - - -	3,500	9
60-64 - - - - -	2,500	7
65-69 - - - - -	1,500	4
70 AND OVER - - - - -	1,500	4
NO REPORT - - - - -	600	2
PROFESSIONAL IDENTIFICATION		
ENGINEER - - - - -	12,500	33
ARCHITECT - - - - -	100	---
PHYSICIST - - - - -	1,800	5
CHEMIST - - - - -	1,400	4
GEOLOGIST - - - - -	200	---
MATHEMATICIAN - - - - -	700	2
METALLURGIST - - - - -	1,400	4
TECHNICIAN - - - - -	4,400	12
OTHER - - - - -	13,000	35
NO REPORT - - - - -	2,100	6
EMPLOYMENT AREA OF TECHNOLOGY		
BIOMEDICAL GROUP - - - - -	400	1
AQUACULTURE - - - - -	-----	---
BIOCHEMISTRY - - - - -	-----	---
BIOENGINEERING - - - - -	-----	---
BIOLOGICAL APPLICATIONS - - - - -	-----	---
BIOMECHANICS - - - - -	-----	---
BIONICS, MEDICAL ELECTRONICS - - - - -	-----	---
HEALTH PHYSICS - - - - -	-----	---
INDUSTRIAL HEALTH - - - - -	-----	---
LIFE SUPPORT - - - - -	-----	---
MEDICAL APPLICATIONS - - - - -	100	---
PHYSIOLOGY - - - - -	-----	---
PUBLIC HEALTH - - - - -	-----	---

GENERAL CHARACTERISTICS OF PROFESSIONAL SOCIETY MEMBERS NOT MEETING CRITERIA IN 1969--CONTINUED

CHARACTERISTICS	NUMBER	PERCENT
EMPLOYMENT FUNCTION		
ADVISING, CONSULTATION - - - - -	2,500	7
CONSTRUCTION, INSTALLATION - - - - -	1,000	3
COORDINATION, LIAISON - - - - -	600	2
COST ESTIMATING, BUDGETING, PROCUREMENT, PURCHASING -	1,100	3
DESIGN - - - - -	2,800	7
DEVELOPMENT - - - - -	1,400	4
DRAFTING, DRAWING, GRAPHICS - - - - -	300	1
EXPLORATION - - - - -	200	---
INFORMATION AND DATA PROCESSING, OR TECHNICAL WRITING	900	2
PLANNING, DIRECTING - - - - -	5,400	14
PRODUCTION, OPERATIONS, MAINTENANCE - - - - -	3,300	9
QUALITY ASSURANCE AND CONTROL, RELIABILITY - - - - -	800	2
RESEARCH - - - - -	2,400	6
SALES, TECHNICAL SERVICES - - - - -	4,400	12
SPECIFYING - - - - -	100	---
TEACHING, INSTRUCTING, TRAINING - - - - -	1,400	4
TESTING, EVALUATION, INSPECTION - - - - -	1,400	4
OTHER - - - - -	900	2
NO REPORT - - - - -	6,800	18
EMPLOYMENT SUPERVISORY RESPONSIBILITY		
NO REGULAR SUPERVISION GIVEN - - - - -	6,800	18
INDIRECT OR STAFF SUPERVISION - - - - -	4,600	12
SUPERVISION OF TEAM OR UNIT - - - - -	3,400	9
SUPERVISION OF PROJECT OR SECTION - - - - -	5,100	14
MANAGEMENT OF MAJOR DEPARTMENT, DIVISION, OR PROGRAM -	6,300	17
GENERAL MANAGEMENT OF ORGANIZATION - - - - -	3,800	10
NO REPORT - - - - -	7,600	20
YEARS OF PROFESSIONAL EXPERIENCE		
1 YEAR OR LESS - - - - -	300	1
2-4 - - - - -	2,200	6
5-9 - - - - -	3,200	8
10-14 - - - - -	4,300	11
15-19 - - - - -	4,300	11
20-24 - - - - -	3,400	9
25-29 - - - - -	2,400	6
30-34 - - - - -	1,800	5
35-39 - - - - -	1,000	3
40 OR MORE - - - - -	1,800	5
NO REPORT - - - - -	12,800	34
HIGHEST DEGREE		
DOCTORATE - - - - -	2,400	6
PROFESSIONAL MEDICAL - - - - -	100	---
PROFESSIONAL ENGINEERING - - - - -	500	1
MASTER'S - - - - -	3,200	8
BACHELOR'S - - - - -	9,300	25
ASSOCIATE - - - - -	2,800	7
LESS THAN ASSOCIATE - - - - -	5,700	15
FOREIGN DEGREE, LEVEL UNKNOWN - - - - -	1,200	3
NO REPORT - - - - -	12,400	33

GENERAL CHARACTERISTICS OF PROFESSIONAL SOCIETY MEMBERS NOT MEETING CRITERIA IN 1969--CONTINUED

CHARACTERISTICS	NUMBER	PERCENT
EMPLOYMENT AREA OF TECHNOLOGY--CONTINUED		
BEHAVIORAL AND SOCIAL GROUP - - - - -	800	2
ECONOMICS - - - - -	200	---
EDUCATIONAL TECHNOLOGY - - - - -	600	2
HISTORY (TECHNOLOGICAL) - - - - -	---	---
HUMAN FACTORS - - - - -	100	---
PSYCHOLOGY - - - - -	---	---
CHEMICAL AND MATERIALS GROUP - - - - -	1,600	4
CHEMICAL APPLICATIONS - - - - -	500	1
COMBUSTION, FUELS - - - - -	100	---
COATING, PLATING, CLADDING - - - - -	100	---
CORROSION - - - - -	100	---
CRYSTALS, CRYSTALLOGRAPHY - - - - -	---	---
ELECTROCHEMISTRY - - - - -	---	---
FILAMENT TECHNOLOGY - - - - -	---	---
FUEL CELLS - - - - -	---	---
MATERIAL APPLICATIONS - - - - -	600	2
MATERIAL PROPERTIES - - - - -	200	---
THERMOCHEMISTRY - - - - -	---	---
METALLURGICAL GROUP - - - - -	2,200	6
BENEFICIATION, ORE PROCESSING - - - - -	100	---
CASTING - - - - -	200	---
METALLURGY (GENERAL) - - - - -	1,100	3
METALLURGY, EXTRACTIVE - - - - -	100	---
METALLURGY, PHYSICAL - - - - -	200	---
METALLURGY, POWDER - - - - -	100	---
METALLURGY, PROCESS - - - - -	400	1
WELDING - - - - -	100	---
EARTH, ATMOSPHERIC AND MARINE GROUP - - - - -	800	2
ATMOSPHERIC SCIENCES, METEOROLOGY - - - - -	---	---
DESALTING - - - - -	---	---
EARTH SCIENCES - - - - -	---	---
GEOCHEMISTRY - - - - -	---	---
GEODESY - - - - -	---	---
GEOLOGY - - - - -	100	---
GEOPHYSICS - - - - -	100	---
HYDROGRAPHY - - - - -	---	---
HYDROLOGY - - - - -	---	---
MARINE SCIENCES - - - - -	100	---
MINING, SURFACE - - - - -	100	---
MINING, UNDERGROUND - - - - -	200	---
MINING, UNDERWATER - - - - -	---	---
OCFANOGRAPHY - - - - -	---	---
OFFSHORE OPERATIONS - - - - -	---	---
UNDERWATER TECHNOLOGY - - - - -	---	---

GENERAL CHARACTERISTICS OF PROFESSIONAL SOCIETY MEMBERS NOT MEETING CRITERIA IN 1969--CONTINUED

CHARACTERISTICS	NUMBER	PERCENT
EMPLOYMENT AREA OF TECHNOLOGY--CONTINUED		
ENVIRONMENTAL AND STRUCTURAL GROUP - - - - -	1,500	4
AIR POLLUTION - - - - -	100	---
CONCRETE TECHNOLOGY - - - - -	-----	---
CONSERVATION, RECLAMATION - - - - -	-----	---
DRAINAGE, IRRIGATION - - - - -	-----	---
ENVIRONMENTAL CONTROL - - - - -	700	2
ENVIRONMENTAL FACTORS - - - - -	-----	---
NOISE REDUCTION - - - - -	-----	---
PHOTOGRAMMETRY - - - - -	-----	---
POLLUTION - - - - -	-----	---
PUBLIC SAFETY - - - - -	-----	---
ROCK MECHANICS - - - - -	-----	---
SANITARY ENGINEERING - - - - -	-----	---
SOILS - - - - -	-----	---
SOLID WASTE - - - - -	-----	---
STRUCTURES - - - - -	200	---
SURVEYING, MAPPING TECHNOLOGY - - - - -	-----	---
TRAFFIC - - - - -	-----	---
TRANSPORTATION - - - - -	200	---
WASTE DISPOSAL - - - - -	-----	---
WATER POLLUTION - - - - -	-----	---
WATER RESOURCES AND SUPPLY - - - - -	100	---
ELECTROMAGNETIC GROUP - - - - -	4,100	11
CIRCUITS, NETWORKS - - - - -	100	---
COMMUNICATION - - - - -	700	2
DIELECTRICS - - - - -	-----	---
ELECTRICAL APPLICATIONS - - - - -	500	1
ELECTRICAL ENGINEERING - - - - -	800	2
ELECTROMAGNETIC RADIATION - - - - -	100	---
ELECTROMECHANICAL TECHNOLOGY - - - - -	100	---
ELECTRONIC APPLICATIONS - - - - -	1,000	3
INFRA-RED, RADIOMETRY - - - - -	-----	---
INSULATION, ELECTRICAL - - - - -	-----	---
MAGNETICS, MAGNETISM - - - - -	-----	---
NAVIGATION - - - - -	-----	---
PHOTOELECTRICITY - - - - -	-----	---
POWER, ELECTRICAL - - - - -	300	1
RADIO FREQUENCY COMPATIBILITY - - - - -	-----	---
RECORDING - - - - -	100	---
SUPERCONDUCTIVITY - - - - -	-----	---
TELECOMMUNICATIONS - - - - -	300	1

GENERAL CHARACTERISTICS OF PROFESSIONAL SOCIETY MEMBERS NOT MEETING CRITERIA IN 1969--CONTINUED

CHARACTERISTICS	NUMBER	PERCENT
EMPLOYMENT AREA OF TECHNOLOGY--CONTINUED		
DYNAMICS AND MECHANICS GROUP - - - - -	2,600	7
AERODYNAMICS - - - - -	100	---
ASTRODYNAMICS - - - - -	100	---
ENERGY GENERATION AND CONVERSION - - - - -	100	---
EXPLOSIVE EFFECTS - - - - -	100	---
FLUID DYNAMICS, FLUID MECHANICS - - - - -	100	---
FLUIDICS - - - - -	-----	---
FRICTION - - - - -	-----	---
GAS DYNAMICS - - - - -	-----	---
HIGH PRESSURE - - - - -	-----	---
HYDRAULICS - - - - -	100	---
HYDRODYNAMICS - - - - -	-----	---
KINETICS - - - - -	-----	---
LUBRICATION - - - - -	100	---
MAGNETOHYDRODYNAMICS - - - - -	-----	---
MASS TRANSFER - - - - -	-----	---
MECHANICAL APPLICATIONS, APPLIED MECHANICS - - - - -	600	2
MECHANICAL ENGINEERING - - - - -	1,100	3
MECHANICS - - - - -	-----	---
POWER, MECHANICAL - - - - -	-----	---
PROPULSION - - - - -	100	---
VACUUM TECHNOLOGY - - - - -	-----	---
HEAT, LIGHT, AND APPLIED PHYSICS GROUP - - - - -	1,500	4
ACOUSTICS, SONICS - - - - -	-----	---
APPLIED PHYSICS - - - - -	200	---
ASTRONOMY AND ASTROPHYSICS - - - - -	-----	---
CRYOGENICS - - - - -	-----	---
HEAT TRANSFER - - - - -	300	1
HIGH TEMPERATURE - - - - -	-----	---
HOLOGRAPHY - - - - -	-----	---
ILLUMINATION, LIGHTING - - - - -	-----	---
INSULATION, THERMAL - - - - -	100	---
OPTICS - - - - -	100	---
PHOTOGRAPHY - - - - -	-----	---
PHYSICS - - - - -	500	1
PLASMAS - - - - -	-----	---
RADIO ASTRONOMY - - - - -	-----	---
SOLID STATE - - - - -	100	---
THERMODYNAMICS - - - - -	100	---
THERMOPHYSICS - - - - -	-----	---
ULTRASONICS - - - - -	-----	---
UNDERWATER ACOUSTICS - - - - -	-----	---
NUCLEAR GROUP - - - - -	200	---
NUCLEAR ENGINEERING - - - - -	100	---
NUCLEONICS - - - - -	-----	---
POWER, NUCLEAR - - - - -	-----	---
RADIATION SAFETY - - - - -	-----	---
RADIOACTIVITY - - - - -	-----	---

GENERAL CHARACTERISTICS OF PROFESSIONAL SOCIETY MEMBERS NOT MEETING CRITERIA IN 1969--CONTINUED

CHARACTERISTICS	NUMBER	PERCENT
EMPLOYMENT AREA OF TECHNOLOGY--CONTINUED		
ENGINEERING PROCESSES AND APPLICATIONS GROUP - - - - -	1,600	4
ASSEMBLY METHODS - - - - -	-----	---
CONTAINERIZING, PACKAGING - - - - -	-----	---
DRILLING - - - - -	200	---
DRYING - - - - -	-----	---
ENGINEERING - - - - -	800	2
FASTENING, JOINING - - - - -	-----	---
FORMING, SHAPING - - - - -	100	---
MATERIAL HANDLING - - - - -	200	---
MILITARY APPLICATIONS - - - - -	100	---
MINIATURIZATION - - - - -	-----	---
PRESERVING - - - - -	-----	---
PROCESSES - - - - -	100	---
REFINING - - - - -	-----	---
SIZE REDUCTION - - - - -	-----	---
AUTOMATION AND CONTROL GROUP - - - - -	2,400	6
ADAPTIVE SYSTEMS - - - - -	-----	---
AUTOMATION, CYBERNETICS - - - - -	100	---
CONTROL (GENERAL) - - - - -	500	1
GUIDANCE, STABILITY - - - - -	100	---
INSTRUMENTATION - - - - -	1,500	4
MEASUREMENT, METROLOGY - - - - -	200	---
SERVO-MECHANISMS - - - - -	-----	---
TELEMETRY - - - - -	-----	---
WORK MANAGEMENT AND EVALUATION GROUP - - - - -	7,300	19
ARRANGEMENT - - - - -	100	---
CONFIGURATION CONTROL - - - - -	-----	---
COST ENGINEERING - - - - -	400	1
EQUIPMENT FACILITIES - - - - -	-----	---
FIRE PREVENTION AND PROTECTION - - - - -	100	---
INDUSTRIAL ENGINEERING - - - - -	1,800	5
MAINTAINABILITY, MAINTENANCE - - - - -	500	1
MANUFACTURING TECHNOLOGY - - - - -	500	1
MOTION AND TIME STUDY - - - - -	-----	---
NONDESTRUCTIVE TESTS - - - - -	100	---
OPERATING PROCEDURES - - - - -	100	---
OPERATIONS RESEARCH, SYSTEMS ANALYSIS - - - - -	300	1
PLANT AND FACILITIES ENGINEERING - - - - -	500	1
PRODUCT ENGINEERING - - - - -	400	1
PRODUCTION METHODS - - - - -	200	---
PRODUCTION PLANNING AND CONTROL - - - - -	300	1
QUALITY ASSURANCE - - - - -	200	---
QUALITY CONTROL - - - - -	200	---
RADIOGRAPHY, X-RAYS - - - - -	-----	---
RELIABILITY - - - - -	100	---
SAFETY ENGINEERING - - - - -	100	---
SPECIFICATIONS, STANDARDS - - - - -	100	---
SYSTEMS ENGINEERING - - - - -	500	1
TESTING-ENVIRONMENTAL, OPERATIONAL - - - - -	300	1
TESTING-LABORATORY - - - - -	300	1
TOOLING, TOOLS - - - - -	200	---
VALUE ENGINEERING - - - - -	-----	---
WORK METHODS AND SIMPLIFICATION - - - - -	100	---



GENERAL CHARACTERISTICS OF PROFESSIONAL SOCIETY MEMBERS NOT MEETING CRITERIA IN 1969--CONTINUED

CHARACTERISTICS	NUMBER	PERCENT
EMPLOYMENT AREA OF TECHNOLOGY--CONTINUED		
INFORMATION AND MATHEMATICS GROUP - - - - -	1,800	5
COMPUTER APPLICATIONS - - - - -	600	2
DATA PROCESSING - - - - -	200	---
DISPLAY - - - - -	---	---
DRAFTING, DRAWING, GRAPHIC TECHNOLOGY - - - - -	500	1
INFORMATION RETRIEVAL - - - - -	200	---
INFORMATION THEORY - - - - -	---	---
LOGIC - - - - -	---	---
MATHEMATICS - - - - -	200	---
NEURAL NETS - - - - -	---	---
REPROGRAPHY - - - - -	---	---
STATISTICS - - - - -	100	---
STRESS ANALYSIS - - - - -	---	---
OTHER - - - - -	1,700	4
NO REPORT - - - - -	7,000	19
EMPLOYMENT PRODUCT OR SERVICE		
AGRICULTURE AND FOOD - - - - -	400	1
AIRCRAFT AND SPACE - - - - -	2,800	7
CERAMICS - - - - -	400	1
CHEMICALS AND ALLIED PRODUCTS - - - - -	1,600	4
COMMUNICATIONS - - - - -	1,400	4
COMPUTERS - - - - -	1,300	3
CONSTRUCTION AND CIVIL ENGINEERING - - - - -	1,400	4
EDUCATIONAL AND INFORMATION SERVICES - - - - -	1,900	5
ELECTRICAL EQUIPMENT AND SERVICES - - - - -	1,800	5
ELECTRONIC EQUIPMENT AND SERVICES - - - - -	3,100	8
LABORATORY, SCIENTIFIC, PHOTOGRAPHIC, AND OPTICAL EQUIPMENT - - - - -	700	2
MACHINERY AND MECHANICAL EQUIPMENT - - - - -	4,600	12
MARINE TRANSPORTATION - - - - -	600	2
MEDICAL AND HEALTH SERVICES - - - - -	300	1
METALS, BASIC (EXCEPT MINING) - - - - -	2,500	7
METAL FABRICATED PRODUCTS - - - - -	1,400	4
MINING - - - - -	800	2
MOTOR VEHICLE TRANSPORTATION - - - - -	300	1
ORDNANCE - - - - -	400	1
PETROLEUM - - - - -	1,100	3
RAILWAY AND RAPID TRANSIT - - - - -	100	---
UTILITIES - - - - -	700	2
OTHER PRODUCTS OR SERVICES - - - - -	2,100	6
NO REPORT - - - - -	5,600	15

GENERAL CHARACTERISTICS OF PROFESSIONAL SOCIETY MEMBERS NOT MEETING CRITERIA IN 1969--CONTINUED

CHARACTERISTICS	NUMBER	PERCENT
PROFESSIONAL SOCIETY MEMBERSHIP		
AERONAUTICS AND ASTRONAUTICS (AIAA) - - - - -	3,100	8
AGRICULTURAL (ASAE) - - - - -	500	1
AIR POLLUTION CONTROL (APCA) - - - - -	200	---
AUDIO (AES) - - - - -	200	---
AUTOMOTIVE (SAE) - - - - -	400	1
CERAMIC (NICE) - - - - -	100	---
CHEMICAL (AIChE) - - - - -	600	2
CIVIL (ASCE) - - - - -	900	2
CONCRETE (ACI) - - - - -	100	---
CONSULTING (AIChE) - - - - -	-----	---
CORROSION (NACE) - - - - -	200	---
COST (AACE) - - - - -	300	1
COUNTY (NACE) - - - - -	-----	---
EDUCATION (ASEE) - - - - -	1,200	3
ELECTRICAL AND ELECTRONICS (IEEE) - - - - -	6,500	17
FIRE PROTECTION (SFPE) - - - - -	200	---
FLUID POWER (FPS) - - - - -	100	---
HEATING, REFRIGERATING, AND AIR-CONDITIONING (ASHRAE)	3,700	10
HISTORY (SHOT) - - - - -	100	---
INDUSTRIAL (AIIE) - - - - -	2,900	8
INSTRUMENT (ISA) - - - - -	3,900	10
ILLUMINATING (IES) - - - - -	100	---
IRON AND STEEL (AISE) - - - - -	400	1
LUBRICATION (ASLE) - - - - -	100	---
MARINE TECHNOLOGY (MTS) - - - - -	100	---
MATERIAL MANAGEMENT (IMMS) - - - - -	100	---
MECHANICAL (ASME) - - - - -	2,100	6
METALS (ASM) - - - - -	4,600	12
MILITARY (SAME) - - - - -	400	1
MINING, METALLURGICAL, PETROLEUM (AIME) - - - - -	3,900	10
MOTION PICTURE (SMPTE) - - - - -	100	---
NAVAL ARCHITECTS AND MARINE (SNAME) - - - - -	800	2
NAVAL ENGINEERS (ASNE) - - - - -	100	---
NAVAL SHIP SYSTEMS COMMAND (ASE) - - - - -	-----	---
NONDESTRUCTIVE TESTING (ASNT) - - - - -	200	---
NUCLEAR (ANS) - - - - -	300	1
PACKAGING & HANDLING (SPHE) - - - - -	-----	---
PACKAGING HANDLING AND LOGISTICS (NIPHE) - - - - -	-----	---
PHOTOGRAMMETRY (ASP) - - - - -	100	---
PHOTOGRAPHIC (SPSE) - - - - -	100	---
PHOTO-OPTICAL INSTRUMENTATION (SPIE) - - - - -	100	---
PLANT (AIPE) - - - - -	800	2
PLASTICS (SPE) - - - - -	200	---
POWER (NAPE) - - - - -	100	---
PROFESSIONAL (NSPE) - - - - -	200	---
PULP AND PAPER (TAPPI) - - - - -	100	---
QUALITY CONTROL (ASQC) - - - - -	400	1

GENERAL CHARACTERISTICS OF PROFESSIONAL SOCIETY MEMBERS NOT MEETING CRITERIA IN 1969--CONTINUED

CHARACTERISTICS	NUMBER	PERCENT
PROFESSIONAL SOCIETY MEMBERSHIP--CONTINUED		
RAILWAY (AREA) - - - - -	-----	---
REPRODUCTION (SRE) - - - - -	-----	---
SAFETY (ASSE) - - - - -	100	---
SANITARY (ASSE) - - - - -	-----	---
STANDARDS (SES) - - - - -	-----	---
STRESS ANALYSIS (SESA) - - - - -	300	1
TRAFFIC (ITE) - - - - -	-----	---
TESTING AND MATERIALS (ASTM) - - - - -	600	2
TOOL AND MANUFACTURING (ASTME) - - - - -	700	2
VALUE (SAVE) - - - - -	100	---
WATER POLLUTION CONTROL (WPCF) - - - - -	100	---
WATER WORKS (AWWA) - - - - -	100	---
WELDING (AWS) - - - - -	400	1
WELL LOG ANALYSTS (SPWLA) - - - - -	-----	---
WOMEN (SWE) - - - - -	500	1
OTHER - - - - -	7,400	20
NONE - - - - -	900	2
NO REPORT - - - - -	2,400	6
TOTAL REPORTING - - - - -	34,300	91
REPORTING MORE THAN ONE SOCIETY - - - - -	12,300	33
WORK SPONSORED		
AGRICULTURE - - - - -	300	3
ATOMIC ENERGY - - - - -	1,400	13
DEFENSE - - - - -	6,200	57
EDUCATION - - - - -	1,300	12
HEALTH - - - - -	800	7
HOUSING - - - - -	400	4
INTERNATIONAL - - - - -	200	2
NATURAL RESOURCES - - - - -	400	4
PUBLIC WORKS - - - - -	600	6
RURAL DEVELOPMENT - - - - -	100	1
SPACE - - - - -	3,000	28
TRANSPORTATION - - - - -	1,100	10
URBAN DEVELOPMENT - - - - -	300	3
OTHER PROGRAM - - - - -	800	7
REPORTING MORE THAN ONE PROGRAM - - - - -	3,500	32
TOTAL REPORTING - - - - -	10,900	
NO SUPPORT - - - - -	20,000	
SUPPORT STATUS UNKNOWN - - - - -	2,000	
NO REPORT - - - - -	4,600	

NOTE - PERCENTS DO NOT ADD TO TOTAL BECAUSE OF RESPONSES INDICATING MULTIPLE SOURCES OF SUPPORT.

GENERAL CHARACTERISTICS OF PROFESSIONAL SOCIETY MEMBERS NOT MEETING CRITERIA IN 1969--CONTINUED

CHARACTERISTICS	NUMBER	PERCENT
GREATEST AREA OF TECHNOLOGY		
BIOMEDICAL GROUP - - - - -	400	1
AQUACULTURE - - - - -	-----	---
BIOCHEMISTRY - - - - -	-----	---
BIOENGINEERING - - - - -	-----	---
BIOLOGICAL APPLICATIONS - - - - -	-----	---
BIOMECHANICS - - - - -	-----	---
BIONICS, MEDICAL ELECTRONICS - - - - -	-----	---
HEALTH PHYSICS - - - - -	-----	---
INDUSTRIAL HEALTH - - - - -	-----	---
LIFE SUPPORT - - - - -	-----	---
MEDICAL APPLICATIONS - - - - -	100	---
PHYSIOLOGY - - - - -	100	---
PUBLIC HEALTH - - - - -	-----	---
BEHAVIORAL AND SOCIAL GROUP - - - - -	800	2
ECONOMICS - - - - -	200	---
EDUCATIONAL TECHNOLOGY - - - - -	500	1
HISTORY (TECHNOLOGICAL) - - - - -	-----	---
HUMAN FACTORS - - - - -	100	---
PSYCHOLOGY - - - - -	-----	---
CHEMICAL AND MATERIALS GROUP - - - - -	1,500	4
CHEMICAL APPLICATIONS - - - - -	500	1
COMBUSTION, FUELS - - - - -	100	---
COATING, PLATING, CLADDING - - - - -	100	---
CORROSION - - - - -	100	---
CRYSTALS, CRYSTALLOGRAPHY - - - - -	-----	---
ELECTROCHEMISTRY - - - - -	100	---
FILAMENT TECHNOLOGY - - - - -	-----	---
FUEL CELLS - - - - -	-----	---
MATERIAL APPLICATIONS - - - - -	500	1
MATERIAL PROPERTIES - - - - -	100	---
THERMOCHEMISTRY - - - - -	-----	---
METALLURGICAL GROUP - - - - -	2,200	6
BENEFICIATION, ORE PROCESSING - - - - -	100	---
CASTING - - - - -	200	---
METALLURGY (GENERAL) - - - - -	1,000	3
METALLURGY, EXTRACTIVE - - - - -	100	---
METALLURGY, PHYSICAL - - - - -	300	1
METALLURGY, POWDER - - - - -	-----	---
METALLURGY, PROCESS - - - - -	400	1
WELDING - - - - -	100	---

# GENERAL CHARACTERISTICS OF PROFESSIONAL SOCIETY MEMBERS NOT MEETING CRITERIA IN 1969--CONTINUED

CHARACTERISTICS	NUMBER	PERCENT
GREATEST AREA OF TECHNOLOGY--CONTINUED		
EARTH, ATMOSPHERIC AND MARINE GROUP - - - - -	800	2
ATMOSPHERIC SCIENCES, METECROLOGY - - - - -	-----	---
DESALTING - - - - -	-----	---
EARTH SCIENCES - - - - -	-----	---
GEOCHEMISTRY - - - - -	-----	---
GEODESY - - - - -	-----	---
GEOLOGY - - - - -	200	---
GEOPHYSICS - - - - -	100	---
HYDROGRAPHY - - - - -	-----	---
HYDROLOGY - - - - -	-----	---
MARINE SCIENCES - - - - -	100	---
MINING, SURFACE - - - - -	100	---
MINING, UNDERGROUND - - - - -	100	---
MINING, UNDERWATER - - - - -	-----	---
OCEANOGRAPHY - - - - -	-----	---
OFFSHORE OPERATIONS - - - - -	-----	---
UNDERWATER TECHNOLOGY - - - - -	-----	---
ENVIRONMENTAL AND STRUCTURAL GROUP - - - - -	1,400	4
AIR POLLUTION - - - - -	100	---
CONCRETE TECHNOLOGY - - - - -	-----	---
CONSERVATION, RECLAMATION - - - - -	-----	---
DRAINAGE, IRRIGATION - - - - -	-----	---
ENVIRONMENTAL CONTROL - - - - -	600	2
ENVIRONMENTAL FACTORS - - - - -	-----	---
NOISE REDUCTION - - - - -	-----	---
PHOTOGRAMMETRY - - - - -	-----	---
POLLUTION - - - - -	-----	---
PUBLIC SAFETY - - - - -	-----	---
ROCK MECHANICS - - - - -	-----	---
SANITARY ENGINEERING - - - - -	-----	---
SOILS - - - - -	-----	---
SOLID WASTE - - - - -	-----	---
STRUCTURES - - - - -	200	---
SURVEYING, MAPPING TECHNOLOGY - - - - -	-----	---
TRAFFIC - - - - -	-----	---
TRANSPORTATION - - - - -	200	---
WASTE DISPOSAL - - - - -	-----	---
WATER POLLUTION - - - - -	-----	---
WATER RESOURCES AND SUPPLY - - - - -	-----	---
ELECTROMAGNETIC GROUP - - - - -	4,000	11
CIRCUITS, NETWORKS - - - - -	100	---
COMMUNICATION - - - - -	700	2
DIELECTRICS - - - - -	-----	---
ELECTRICAL APPLICATIONS - - - - -	500	1
ELECTRICAL ENGINEERING - - - - -	700	2
ELECTROMAGNETIC RADIATION - - - - -	100	---
ELECTROMECHANICAL TECHNOLOGY - - - - -	100	---
ELECTRONIC APPLICATIONS - - - - -	1,000	3
INFRA-RED, RADIOMETRY - - - - -	-----	---
INSULATION, ELECTRICAL - - - - -	-----	---
MAGNETICS, MAGNETISM - - - - -	-----	---
NAVIGATION - - - - -	100	---
PHOTOELECTRICITY - - - - -	-----	---
POWER, ELECTRICAL - - - - -	200	---
RADIO FREQUENCY COMPATIBILITY - - - - -	-----	---
RECORDING - - - - -	100	---
SUPERCONDUCTIVITY - - - - -	-----	---
TELECOMMUNICATIONS - - - - -	300	1

GENERAL CHARACTERISTICS OF PROFESSIONAL SOCIETY MEMBERS NOT MEETING CRITERIA IN 1969--CONTINUED

CHARACTERISTICS	NUMBER	PERCENT
GREATEST AREA OF TECHNOLOGY--CONTINUED		
DYNAMICS AND MECHANICS GROUP - - - - -	2,500	7
AERODYNAMICS - - - - -	100	---
ASTRODYNAMICS - - - - -	100	---
ENERGY GENERATION AND CONVERSION - - - - -	-----	---
EXPLOSIVE EFFECTS - - - - -	100	---
FLUID DYNAMICS, FLUID MECHANICS - - - - -	100	---
FLUIDICS - - - - -	-----	---
FRICTION - - - - -	-----	---
GAS DYNAMICS - - - - -	-----	---
HIGH PRESSURE - - - - -	-----	---
HYDRAULICS - - - - -	100	---
HYDRODYNAMICS - - - - -	-----	---
KINETICS - - - - -	-----	---
LUBRICATION - - - - -	100	---
MAGNETOHYDRODYNAMICS - - - - -	-----	---
MASS TRANSFER - - - - -	-----	---
MECHANICAL APPLICATIONS, APPLIED MECHANICS - - -	600	2
MECHANICAL ENGINEERING - - - - -	1,000	3
MECHANICS - - - - -	-----	---
POWER, MECHANICAL - - - - -	-----	---
PROPULSION - - - - -	100	---
VACUUM TECHNOLOGY - - - - -	-----	---
HEAT, LIGHT, AND APPLIED PHYSICS GROUP - - - - -	1,600	4
ACOUSTICS, SONICS - - - - -	-----	---
APPLIED PHYSICS - - - - -	200	---
ASTRONOMY AND ASTROPHYSICS - - - - -	-----	---
CRYOGENICS - - - - -	-----	---
HEAT TRANSFER - - - - -	300	1
HIGH TEMPERATURE - - - - -	-----	---
HOLOGRAPHY - - - - -	-----	---
ILLUMINATION, LIGHTING - - - - -	-----	---
INSULATION, THERMAL - - - - -	100	---
OPTICS - - - - -	-----	---
PHOTOGRAPHY - - - - -	-----	---
PHYSICS - - - - -	500	1
PLASMAS - - - - -	-----	---
RADIO ASTRONOMY - - - - -	-----	---
SOLID STATE - - - - -	100	---
THERMODYNAMICS - - - - -	100	---
THERMOPHYSICS - - - - -	-----	---
ULTRASONICS - - - - -	-----	---
UNDERWATER ACOUSTICS - - - - -	-----	---

GENERAL CHARACTERISTICS OF PROFESSIONAL SOCIETY MEMBERS NOT MEETING CRITERIA IN 1969--CONTINUED

CHARACTERISTICS	NUMBER	PERCENT
GREATEST AREA OF TECHNOLOGY--CONTINUED		
NUCLEAR GROUP - - - - -	200	---
NUCLEAR ENGINEERING - - - - -	100	---
NUCLEONICS - - - - -	-----	---
POWER, NUCLEAR - - - - -	-----	---
RADIATION SAFETY - - - - -	-----	---
RADIOACTIVITY - - - - -	-----	---
ENGINEERING PROCESSES AND APPLICATIONS GROUP - - - - -	1,500	4
ASSEMBLY METHODS - - - - -	100	---
CONTAINERIZING, PACKAGING - - - - -	-----	---
DRILLING - - - - -	200	---
DRYING - - - - -	-----	---
ENGINEERING - - - - -	800	2
FASTENING, JOINING - - - - -	-----	---
FORMING, SHAPING - - - - -	100	---
MATERIAL HANDLING - - - - -	200	---
MILITARY APPLICATIONS - - - - -	100	---
MINIATURIZATION - - - - -	-----	---
PRESERVING - - - - -	-----	---
PROCESSES - - - - -	100	---
REFINING - - - - -	-----	---
SIZE REDUCTION - - - - -	-----	---
AUTOMATION AND CONTROL GROUP - - - - -	2,300	6
ADAPTIVE SYSTEMS - - - - -	-----	---
AUTOMATION, CYBERNETICS - - - - -	100	---
CONTROL (GENERAL) - - - - -	500	1
GUIDANCE, STABILITY - - - - -	100	---
INSTRUMENTATION - - - - -	1,400	4
MEASUREMENT, METROLOGY - - - - -	200	---
SERVO-MECHANISMS - - - - -	-----	---
TELEMETRY - - - - -	-----	---
WORK MANAGEMENT AND EVALUATION GROUP - - - - -	7,000	19
ARRANGEMENT - - - - -	100	---
CONFIGURATION CONTROL - - - - -	-----	---
COST ENGINEERING - - - - -	300	1
EQUIPMENT FACILITIES - - - - -	-----	---
FIRE PREVENTION AND PROTECTION - - - - -	100	---
INDUSTRIAL ENGINEERING - - - - -	1,800	5
MAINTAINABILITY, MAINTENANCE - - - - -	500	1
MANUFACTURING TECHNOLOGY - - - - -	500	1
MOTION AND TIME STUDY - - - - -	-----	---
NONDESTRUCTIVE TESTS - - - - -	100	---
OPERATING PROCEDURES - - - - -	100	---
OPERATIONS RESEARCH, SYSTEMS ANALYSIS - - - - -	200	---
PLANT AND FACILITIES ENGINEERING - - - - -	400	1
PRODUCT ENGINEERING - - - - -	300	1
PRODUCTION METHODS - - - - -	200	---
PRODUCTION PLANNING AND CONTROL - - - - -	200	---
QUALITY ASSURANCE - - - - -	200	---

GENERAL CHARACTERISTICS OF PROFESSIONAL SOCIETY MEMBERS NOT MEETING CRITERIA IN 1969--CONTINUED

CHARACTERISTICS	NUMBER	PERCENT
GREATEST AREA OF TECHNOLOGY--CONTINUED		
QUALITY CONTROL - - - - -	300	1
RADIOGRAPHY, X-RAYS - - - - -	-----	---
RELIABILITY - - - - -	-----	---
SAFETY ENGINEERING - - - - -	100	---
SPECIFICATIONS, STANDARDS - - - - -	100	---
SYSTEMS ENGINEERING - - - - -	500	1
TESTING-ENVIRONMENTAL, OPERATIONAL - - - - -	300	1
TESTING-LABORATORY - - - - -	300	1
TOOLING, TOOLS - - - - -	100	---
VALUE ENGINEERING - - - - -	-----	---
WORK METHODS AND SIMPLIFICATION - - - - -	100	---
INFORMATION AND MATHEMATICS GROUP - - - - -	1,600	4
COMPUTER APPLICATIONS - - - - -	500	1
DATA PROCESSING - - - - -	200	---
DISPLAY - - - - -	-----	---
DRAFTING, DRAWING, GRAPHIC TECHNOLOGY - - - - -	400	1
INFORMATION RETRIEVAL - - - - -	200	---
INFORMATION THEORY - - - - -	-----	---
LOGIC - - - - -	-----	---
MATHEMATICS - - - - -	300	1
NEURAL NETS - - - - -	-----	---
REPROGRAPHY - - - - -	-----	---
STATISTICS - - - - -	-----	---
STRESS ANALYSIS - - - - -	100	---
OTHER - - - - -	1,600	4
NO REPORT - - - - -	8,000	21
REGISTERED ENGINEERS		
YES - - - - -	1,000	3
NUMBER OF STATES		
1 - - - - -	800	2
2 - - - - -	100	---
3 - - - - -	-----	---
4 - - - - -	-----	---
5 - - - - -	-----	---
6 - - - - -	-----	---
7 - - - - -	-----	---
8 - - - - -	-----	---
9 - - - - -	-----	---
10 OR MORE - - - - -	-----	---
NO REPORT OF NUMBER OF STATES - - - - -	-----	---
NO - - - - -	35,000	93
NO REPORT - - - - -	1,500	4

NOTE - GROUPS OR PERCENTS MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.

SOURCE - NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969.



GEOGRAPHIC LOCATIONS OF PROFESSIONAL SOCIETY MEMBERS NOT MEETING  
CRITERIA IN 1969

GEOGRAPHIC LOCATION	NUMBER	PERCENT
ALL LOCATIONS - - - - -	37,500	100
NEW ENGLAND - - - - -	2,600	7
CONNECTICUT - - - - -	900	2
MAINE - - - - -	100	---
MASSACHUSETTS - - - - -	1,200	3
NEW HAMPSHIRE - - - - -	100	---
RHODE ISLAND - - - - -	200	---
VERMONT - - - - -	100	---
MIDDLE ATLANTIC - - - - -	8,000	21
NEW JERSEY - - - - -	1,700	4
NEW YORK - - - - -	3,800	10
PENNSYLVANIA - - - - -	2,600	7
EAST NORTH CENTRAL - - - - -	7,800	21
ILLINOIS - - - - -	2,200	6
INDIANA - - - - -	900	2
MICHIGAN - - - - -	1,400	4
OHIO - - - - -	2,700	7
WISCONSIN - - - - -	600	2
WEST NORTH CENTRAL - - - - -	2,200	6
IOWA - - - - -	600	2
KANSAS - - - - -	300	1
MINNESOTA - - - - -	400	1
MISSOURI - - - - -	700	2
NEBRASKA - - - - -	100	---
NORTH DAKOTA - - - - -	---	---
SOUTH DAKOTA - - - - -	100	---
SOUTH ATLANTIC - - - - -	4,700	12
DELAWARE - - - - -	200	---
DISTRICT OF COLUMBIA - - - - -	600	2
FLORIDA - - - - -	1,000	3
GEORGIA - - - - -	400	1
MARYLAND - - - - -	1,100	3
NORTH CAROLINA - - - - -	600	2
SOUTH CAROLINA - - - - -	200	---
VIRGINIA - - - - -	500	1
WEST VIRGINIA - - - - -	200	---

GEOGRAPHIC LOCATIONS OF PROFESSIONAL SOCIETY MEMBERS NOT MEETING  
CRITERIA IN 1969--CONTINUED

GEOGRAPHIC LOCATION--CONTINUED	NUMBER	PERCENT
EAST SOUTH CENTRAL - - - - -	1,300	3
ALABAMA - - - - -	400	1
KENTUCKY - - - - -	300	1
MISSISSIPPI - - - - -	200	---
TENNESSEE - - - - -	400	1
WEST SOUTH CENTRAL - - - - -	3,100	8
ARKANSAS - - - - -	100	---
LOUISIANA - - - - -	500	1
OKLAHOMA - - - - -	400	1
TEXAS - - - - -	2,100	6
MOUNTAIN - - - - -	1,900	5
ARIZONA - - - - -	500	1
COLORADO - - - - -	500	1
IDAHO - - - - -	200	---
MONTANA - - - - -	100	---
NEVADA - - - - -	100	---
NEW MEXICO - - - - -	200	---
UTAH - - - - -	200	---
WYOMING - - - - -	100	---
PACIFIC - - - - -	5,600	15
ALASKA - - - - -	-----	---
CALIFORNIA - - - - -	4,700	12
HAWAII - - - - -	-----	---
OREGON - - - - -	200	---
WASHINGTON - - - - -	600	2
U.S. TERRITORIES AND POSSESSIONS - - - - -	-----	---
CANAL ZONE - - - - -	-----	---
GUAM - - - - -	-----	---
PUERTO RICO - - - - -	-----	---
VIRGIN ISLANDS - - - - -	-----	---
FOREIGN - - - - -	200	---

NOTE - GROUPS OR PERCENTS MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.

SOURCE - NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969.

## NUMBER OF PROFESSIONAL SOCIETY MEMBERS NOT MEETING CRITERIA BY CURRICULUM

CURRICULUM OF HIGHEST DEGREE	TOTAL	HIGHEST DEGREE		
		DOCTORATE	PROFESS- IONAL MEDICAL	PROFESS- IONAL ENGINEER- ING
ALL CURRICULA - - - - -	37,500	2,400	100	500
AERONAUTICAL AND ASTRONAUTICAL	300	-----	-----	-----
AGRICULTURAL - - - - -	-----	-----	-----	-----
ARCHITECTURAL - - - - -	100	-----	-----	-----
BIOENGINEERING - - - - -	-----	-----	-----	-----
CERAMIC - - - - -	-----	-----	-----	-----
CHEMICAL - - - - -	200	-----	-----	-----
CIVIL - - - - -	500	-----	-----	100
COMMUNICATIONS - - - - -	-----	-----	-----	-----
CONSTRUCTION - - - - -	-----	-----	-----	-----
ELECTRICAL - - - - -	800	-----	-----	100
ELECTRONIC - - - - -	600	-----	-----	-----
ENGINEERING MECHANICS - - - - -	100	-----	-----	-----
ENGINEERING GENERAL - - - - -	200	-----	-----	-----
ENGINEERING PHYSICS - - - - -	-----	-----	-----	-----
ENGINEERING SCIENCE - - - - -	100	-----	-----	-----
ENGINEERING TECHNOLOGY - - - - -	400	-----	-----	-----
ENVIRONMENTAL - - - - -	100	-----	-----	-----
GEOLOGICAL - - - - -	100	-----	-----	-----
GEOPHYSICAL - - - - -	-----	-----	-----	-----
INDUSTRIAL - - - - -	100	-----	-----	-----
MARINE - - - - -	-----	-----	-----	-----
MATERIALS - - - - -	-----	-----	-----	-----
MECHANICAL - - - - -	800	-----	-----	100
METALLURGICAL - - - - -	200	-----	-----	-----
MINERAL - - - - -	-----	-----	-----	-----
MINING - - - - -	100	-----	-----	-----
NAVAL ARCHITECTURE - - - - -	-----	-----	-----	-----
NUCLEAR - - - - -	-----	-----	-----	-----
PETROLEUM - - - - -	-----	-----	-----	-----
SANITARY - - - - -	-----	-----	-----	-----
TEXTILE - - - - -	-----	-----	-----	-----
TRANSPORTATION - - - - -	-----	-----	-----	-----
WELDING - - - - -	-----	-----	-----	-----
OTHER ENGINEERING - - - - -	200	-----	-----	-----
BUSINESS ADMINISTRATION - - - - -	3,600	-----	-----	-----
CHEMISTRY - - - - -	1,800	600	-----	-----
PHYSICS - - - - -	2,400	900	-----	-----
OTHER NONENGINEERING - - - - -	5,300	700	100	-----
NO REPORT - - - - -	19,400	200	-----	100

NOTE - GROUPS MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.

SOURCE - NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969.

# ONAL SOCIETY MEMBERS NOT MEETING CRITERIA BY CURRICULUM AND HIGHEST DEGREE, 1969

DEGREE	TOTAL	HIGHEST DEGREE						LESS THAN ASSOCI- ATE	FOREIGN DEGREE, LEVEL UNKNOWN	NO REPORT
		DOCTORATE	PROFESS- IONAL MEDICAL	PROFESS- IONAL ENGINEER- ING	MASTER'S	BACHE- LOR'S	ASSOCI- ATE			
- - -	37,500	2,400	100	500	3,200	9,300	2,800	5,700	1,200	12,400
TICAL	300	-----	-----	-----	-----	-----	200	-----	100	-----
- - -	100	-----	-----	-----	-----	-----	-----	-----	-----	-----
- - -	200	-----	-----	-----	-----	100	-----	-----	100	-----
- - -	500	-----	-----	100	-----	200	-----	-----	100	-----
- - -	800	-----	-----	100	-----	200	300	-----	200	-----
- - -	600	-----	-----	-----	-----	-----	600	-----	100	-----
- - -	100	-----	-----	-----	-----	-----	100	-----	-----	-----
- - -	200	-----	-----	-----	-----	-----	200	-----	100	-----
- - -	100	-----	-----	-----	-----	-----	100	-----	-----	-----
- - -	400	-----	-----	-----	-----	-----	400	-----	-----	-----
- - -	100	-----	-----	-----	-----	-----	100	-----	-----	-----
- - -	100	-----	-----	-----	-----	-----	-----	-----	-----	-----
- - -	100	-----	-----	-----	-----	-----	100	-----	-----	-----
- - -	800	-----	-----	100	-----	200	200	-----	200	-----
- - -	200	-----	-----	-----	-----	-----	100	-----	-----	-----
- - -	100	-----	-----	-----	-----	100	-----	-----	-----	-----
- - -	200	-----	-----	-----	-----	-----	100	-----	-----	-----
- - -	3,600	-----	-----	-----	700	2,700	100	-----	-----	-----
- - -	1,800	600	-----	-----	200	1,000	-----	-----	-----	-----
- - -	2,400	900	-----	-----	600	1,000	-----	-----	-----	-----
- - -	5,300	700	100	-----	1,300	3,100	100	-----	-----	-----
- - -	19,400	200	-----	100	200	700	-----	5,700	-----	12,400

TO TOTAL BECAUSE OF ROUNDING.

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY LEVELS

GENERAL CHARACTERISTICS	TOTAL	DOCTORATE	PROFES- SIONAL MEDICAL	PROFES- SIONAL ENGINEER	MAS-
TOTAL ENGINEERS REPORTING - - - - -	308,000	24,500	100	13,200	71
CURRICULUM OF DEGREE					
AEROSPACE - - - - -	13,100	1,300	-----	400	4
CHEMICAL - - - - -	26,600	4,200	-----	700	5
CIVIL - - - - -	48,600	2,600	-----	2,400	10
ELECTRICAL - - - - -	65,500	2,900	-----	2,900	12
GENERAL - - - - -	26,300	3,400	-----	1,100	6
MECHANICAL - - - - -	58,500	2,800	-----	2,900	9
METALLURGICAL - - - - -	12,800	2,500	-----	700	3
MINERAL - - - - -	15,400	900	-----	1,600	2
OTHER - - - - -	34,300	3,900	100	400	16
NO REPORT - - - - -	6,800	-----	-----	200	
STUDENT STATUS					
FULL-TIME - - - - -	2,900	100	-----	100	1
PART-TIME - - - - -	11,700	100	-----	200	3
NO REPORT - - - - -	293,400	24,300	100	12,800	66
PROFESSIONAL IDENTIFICATION					
ENGINEER - - - - -	254,700	8,300	-----	10,800	58
OTHER - - - - -	44,400	5,400	100	2,000	10
NO REPORT - - - - -	8,800	700	-----	400	2
REGISTERED ENGINEERS					
YES - - - - -	131,100	8,400	-----	7,100	29
NO - - - - -	171,400	15,600	100	5,800	40
NO REPORT - - - - -	5,400	500	-----	300	1
PROFESSIONAL EMPLOYMENT STATUS					
PROFESSIONALLY EMPLOYED - - -	293,600	23,700	100	11,100	68
SEEKING EMPLOYMENT - - - - -	2,000	100	-----	100	
NOT SEEKING EMPLOYMENT - - - -	10,700	500	-----	1,900	1
NO REPORT - - - - -	1,600	100	-----	100	

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969  
 CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY LEVELS OF HIGHEST DEGREE

CHARACTERISTICS	TOTAL	HIGHEST DEGREE							NO REPORT OF DEGREE
		DOCTORATE	PROFES- SIONAL MEDICAL	PROFES- SIONAL ENGINEER	MASTER'S	BACHELOR'S	LESS THAN BACHELOR'S DEGREE	OTHER	
G - - - - -	308,000	24,500	100	13,200	71,100	185,300	9,400	400	4,000
- - - - -	13,100	1,300	-----	400	4,000	7,100	300	-----	-----
- - - - -	26,600	4,200	-----	700	5,700	15,700	200	-----	-----
- - - - -	48,600	2,600	-----	2,400	10,200	32,900	400	100	-----
- - - - -	65,500	2,900	-----	2,900	12,600	44,800	2,300	100	-----
- - - - -	26,300	3,400	-----	1,100	6,400	13,700	1,700	-----	-----
- - - - -	58,500	2,800	-----	2,900	9,600	42,000	1,200	100	-----
- - - - -	12,800	2,500	-----	700	3,200	6,200	200	-----	-----
- - - - -	15,400	900	-----	1,600	2,600	10,200	200	-----	-----
- - - - -	34,300	3,900	100	400	16,400	12,400	1,000	-----	-----
- - - - -	6,800	-----	-----	200	200	400	1,900	-----	4,000
- - - - -	2,900	100	-----	100	1,400	1,300	-----	-----	-----
- - - - -	11,700	100	-----	200	3,500	7,400	400	-----	-----
- - - - -	293,400	24,300	100	12,800	66,200	176,700	9,000	400	3,900
ON									
- - - - -	254,700	18,300	-----	10,800	58,700	154,400	8,800	300	3,500
- - - - -	44,400	5,400	100	2,000	10,400	25,600	500	-----	300
- - - - -	8,300	700	-----	400	2,000	5,400	100	-----	200
- - - - -	131,100	8,400	-----	7,100	29,600	79,800	1,900	400	4,000
- - - - -	171,400	15,600	100	5,800	40,200	102,400	7,400	-----	-----
- - - - -	5,400	500	-----	300	1,300	3,200	200	-----	-----
TATUS									
YED - - -	293,600	23,700	100	11,100	68,400	177,700	8,900	300	3,300
- - - - -	2,000	100	-----	100	500	1,200	100	-----	100
NT - - - -	10,700	500	-----	1,900	1,800	5,500	400	-----	600
- - - - -	1,600	100	-----	100	400	900	-----	-----	100

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL  
CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY LEVEL

GENERAL CHARACTERISTICS	TOTAL	DOCTORATE	PROFES- SIONAL MEDICAL	PROFES- SIONAL ENGINEER
<b>PRODUCTS OR SERVICES</b>				
AGRICULTURE AND FOOD - - - - -	4,000	400	-----	100
AIRCRAFT AND SPACE - - - - -	33,000	2,800	-----	900
CERAMICS - - - - -	2,100	200	-----	-----
CHEMICALS, ALLIED PROD. - - - - -	19,500	2,000	-----	600
COMMUNICATIONS - - - - -	7,700	400	-----	300
COMPUTERS - - - - -	11,000	900	-----	300
CONSTRUCTION, CIVIL ENGR. - - - - -	45,900	1,400	-----	1,700
EDUC., INFORMATION SERV. - - - - -	14,600	7,300	-----	400
ELECTRICAL EQUIP., SERV. - - - - -	19,200	500	-----	900
ELECTRONIC EQUIP., SERV. - - - - -	23,000	1,500	-----	600
LAB-SCI-PHOTO-OPT EQUIP. - - - - -	2,800	200	-----	200
MACHINERY, MECH. EQUIP. - - - - -	28,400	900	-----	1,100
MARINE TRANSPORTATION - - - - -	4,800	200	-----	200
MEDICAL, HEALTH SERVICES - - - - -	1,300	200	100	-----
METALS, BASIC - - - - -	12,600	1,700	-----	600
METAL FABRICATED PROD. - - - - -	6,300	200	-----	200
MINING - - - - -	5,900	400	-----	700
MOTOR VEHICLE TRANS. - - - - -	2,500	100	-----	100
ORDNANCE - - - - -	5,200	300	-----	200
PETROLEUM - - - - -	15,500	800	-----	600
RAILWAY, RAPID TRANSIT - - - - -	1,500	-----	-----	100
UTILITIES - - - - -	14,700	200	-----	700
OTHER PRODUCTS, SERVICES - - - - -	11,300	1,000	-----	400
NO REPORT - - - - -	15,200	1,000	-----	2,100
<b>AREAS OF TECHNOLOGY</b>				
BIOMEDICAL - - - - -	1,600	500	-----	-----
BEHAVIORAL AND SOCIAL - - - - -	4,100	700	-----	100
CHEMICAL AND MATERIALS - - - - -	11,700	1,900	-----	300
METALLURGICAL - - - - -	12,100	2,000	-----	600
EARTH, ATMOSPHERE, MARINE - - - - -	9,900	900	-----	700
ENVIRONMENTAL, STRUCTURAL - - - - -	33,700	2,300	-----	1,300
ELECTROMAGNETIC - - - - -	42,800	1,900	-----	1,800
DYNAMICS AND MECHANICS - - - - -	40,100	4,600	-----	1,500
HEAT, LIGHT, APPL. PHYSICS - - - - -	8,500	1,900	-----	200
NUCLEAR - - - - -	2,600	400	-----	100
ENGR. PROCESS-APPLICATION - - - - -	32,100	1,600	-----	1,200
AUTOMATION AND CONTROL - - - - -	12,400	700	-----	500
WORK MGMT, EVALUATION - - - - -	56,500	1,700	-----	1,800
INFORMATION, MATHEMATICS - - - - -	11,500	1,200	-----	300
OTHER - - - - -	9,700	800	-----	400
NO REPORT - - - - -	18,700	1,300	-----	2,300

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY LEVELS OF HIGHEST DEGREE--CONTINUED

CHARACTERISTICS	TOTAL	HIGHEST DEGREE							NO REPORT OF DEGREE
		DOCTORATE	PROFES- SIONAL MEDICAL	PROFES- SIONAL ENGINEER	MASTER'S	BACHELOR'S	LESS THAN BACHELOR'S DEGREE	OTHER	
D	4,000	400	-----	100	1,100	2,300	100	-----	-----
-	33,000	2,800	-----	900	10,800	17,300	900	-----	200
-	2,100	200	-----	-----	400	1,300	-----	-----	-----
ROD.	19,500	2,000	-----	600	5,000	11,500	300	-----	100
-	7,700	400	-----	300	1,700	4,600	600	-----	100
-	11,000	900	-----	300	3,700	5,900	200	-----	-----
ENGR.	45,900	1,400	-----	1,700	9,600	31,000	900	100	1,000
SERV.	14,600	7,300	-----	400	4,900	1,900	100	-----	-----
SERV.	19,200	500	-----	900	2,800	13,700	900	-----	300
SERV.	23,000	1,500	-----	600	6,800	12,900	1,100	-----	200
QUIP.	2,800	200	-----	200	700	1,500	100	-----	-----
UIP.	28,400	900	-----	1,100	4,600	19,900	1,300	-----	500
ON	4,800	200	-----	200	1,200	2,800	300	-----	-----
VICES	1,300	200	100	-----	400	600	-----	-----	-----
-	12,600	1,700	-----	600	2,700	7,300	300	-----	-----
OD.	6,300	200	-----	200	1,000	4,300	400	-----	100
-	5,900	400	-----	700	1,100	3,600	100	-----	100
-	2,500	100	-----	100	700	1,500	100	-----	-----
-	5,200	300	-----	200	1,400	3,100	200	-----	-----
-	15,500	800	-----	600	2,700	11,200	200	-----	100
SIT	1,500	-----	-----	100	200	1,100	100	-----	-----
-	14,700	200	-----	700	1,800	11,400	300	-----	300
VICES	11,300	1,000	-----	400	2,800	6,700	300	-----	100
-	15,200	1,000	-----	2,100	3,000	7,900	500	-----	600
-	1,600	500	-----	-----	500	600	-----	-----	-----
AL	4,100	700	-----	100	1,600	1,600	100	-----	-----
ALS	11,700	1,900	-----	300	2,800	6,400	200	-----	100
-	12,100	2,000	-----	600	2,700	6,400	300	-----	-----
INE	9,900	900	-----	700	2,300	5,700	100	-----	100
TURAL	33,700	2,300	-----	1,300	8,400	20,400	600	100	500
-	42,800	1,900	-----	1,800	8,800	27,800	1,900	-----	700
ICS	40,100	4,600	-----	1,500	9,600	22,700	1,200	100	400
YSICS	8,500	1,900	-----	200	2,600	3,500	100	-----	100
-	2,600	400	-----	100	800	1,300	-----	-----	-----
ATION	32,100	1,600	-----	1,200	6,500	21,300	900	100	500
ROL	12,400	700	-----	500	2,700	7,900	600	-----	100
N	56,500	1,700	-----	1,800	11,900	38,000	2,400	-----	700
TICS	11,500	1,200	-----	300	3,900	5,900	200	-----	-----
-	9,700	800	-----	400	2,400	5,800	200	-----	100
-	18,700	1,300	-----	2,300	3,600	10,200	600	-----	700



NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY LEVELS OF HIGHER

GENERAL CHARACTERISTICS	TOTAL	DOCTORATE	PROFES- SIONAL MEDICAL	PROFES- SIONAL ENGINEER	HIGHER MASTER'S
TYPE OF EMPLOYER					
PRIV. INDUSTRY, BUSINESS - - - - -	211,100	10,000	-----	7,700	47,000
SELF-EMPLOYED - - - - -	11,400	500	-----	1,000	1,600
COLLEGE, UNIVERSITY - - - - -	20,200	10,400	-----	600	6,700
JR. COLLEGE, TECH. INST. - - - - -	900	100	-----	-----	500
SEC., ELEM., OTHER SCHOOL - - - - -	300	-----	-----	-----	100
NONPROFIT ORGANIZATION - - - - -	5,400	800	-----	300	1,900
FEDERAL GOVERNMENT - - - - -	24,600	1,200	-----	800	5,700
USPHS, MILITARY SERVICE - - - - -	4,900	200	-----	200	2,200
STATE GOVERNMENT - - - - -	5,900	100	-----	200	1,000
LOCAL GOVERNMENT - - - - -	4,800	-----	-----	200	900
OTHER - - - - -	4,600	200	-----	200	1,000
NO REPORT - - - - -	14,000	800	-----	2,000	2,500
FUNCTIONS					
DESIGN - - - - -	53,600	900	-----	1,700	12,100
DEVELOPMENT - - - - -	32,300	2,100	-----	900	9,800
RESEARCH - - - - -	22,000	6,500	-----	600	7,800
PRODUCTION - - - - -	56,600	600	-----	2,400	7,800
CONTROL - - - - -	104,700	5,300	-----	4,600	23,900
TEACHING - - - - -	14,700	7,600	-----	400	4,700
OTHER - - - - -	6,200	300	-----	200	1,600
NO REPORT - - - - -	17,900	1,200	-----	2,300	3,400
SUPERVISORY LEVEL					
NO REG. SUPV. GIVEN - - - - -	52,200	4,900	-----	1,900	13,400
INDIRECT OR STAFF - - - - -	50,400	4,300	-----	1,700	12,000
TEAM OR UNIT - - - - -	33,900	2,700	-----	900	8,300
PROJECT OR SECTION - - - - -	61,700	4,700	-----	2,000	14,600
MAJOR DEPT., DIV., PROGRAM - - - - -	56,900	4,400	-----	2,300	12,900
GEN. MGMT. OF ORGANIZATION - - - - -	28,800	1,900	-----	1,600	5,200
NO REPORT - - - - -	24,000	1,800	-----	2,700	4,700

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY LEVELS OF HIGHEST DEGREE--CONTINUED

TOTAL	HIGHEST DEGREE							NO REPORT OF DEGREE
	DOCTORATE	PROFES- SIONAL MEDICAL	PROFES- SIONAL ENGINEER	MASTER'S	BACHELOR'S	LESS THAN BACHELOR'S DEGREE	OTHER	
- - - 211,100	10,000	-----	7,700	47,000	136,600	7,300	300	2,200
- - - 11,400	500	-----	1,000	1,600	7,400	400	-----	500
- - - 20,200	10,400	-----	600	6,700	2,400	100	-----	-----
- - - 900	100	-----	-----	500	300	-----	-----	-----
- - - 300	-----	-----	-----	100	100	-----	-----	-----
- - - 5,400	800	-----	300	1,900	2,700	100	-----	-----
- - - 24,600	1,200	-----	800	5,700	16,000	600	-----	300
- - - 4,900	200	-----	200	2,200	2,200	-----	-----	-----
- - - 5,900	100	-----	200	1,000	4,200	100	-----	200
- - - 4,800	-----	-----	200	900	3,400	100	-----	100
- - - 4,600	200	-----	200	1,000	2,900	200	-----	100
- - - 14,000	800	-----	2,000	2,500	7,500	500	-----	600
- - - 53,600	900	-----	1,700	12,100	36,100	2,000	100	800
- - - 32,300	2,100	-----	900	9,800	18,600	700	-----	200
- - - 22,000	6,500	-----	600	7,800	6,800	200	-----	-----
- - - 56,600	600	-----	2,400	7,800	43,000	2,100	-----	700
- - - 104,700	5,300	-----	4,600	23,900	65,500	3,500	100	1,600
- - - 14,700	7,600	-----	400	4,700	1,800	100	-----	-----
- - - 6,200	300	-----	200	1,600	3,900	200	-----	-----
- - - 17,900	1,200	-----	2,300	3,400	9,700	600	-----	700
- - - 52,200	4,900	-----	1,900	13,400	30,000	1,500	-----	500
- - - 50,400	4,300	-----	1,700	12,000	30,400	1,500	-----	500
- - - 33,900	2,700	-----	900	8,300	20,800	1,000	-----	200
- - - 61,700	4,700	-----	2,000	14,600	37,700	2,000	200	600
- - - 56,900	4,400	-----	2,300	12,900	34,500	2,000	100	700
- - - 28,800	1,900	-----	1,600	5,200	18,400	900	-----	700
- - - 24,000	1,800	-----	2,700	4,700	13,500	600	100	700

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL  
CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY LOCATION

GENERAL CHARACTERISTICS					TOTAL	DOCTORATE	PROFES- SIONAL MEDICAL	PROFES- SIONAL ENGINEERING
ALL GEOGRAPHIC LOCATIONS	-	-	-	-	308,000	24,500	100	13,700
NEW ENGLAND	-	-	-	-	21,800	1,800	-----	900
CONNECTICUT	-	-	-	-	6,600	400	-----	200
MAINE	-	-	-	-	700	100	-----	-----
MASSACHUSETTS	-	-	-	-	12,300	1,100	-----	500
NEW HAMPSHIRE	-	-	-	-	900	100	-----	-----
RHODE ISLAND	-	-	-	-	1,000	100	-----	-----
VERMONT	-	-	-	-	500	-----	-----	-----
MIDDLE ATLANTIC	-	-	-	-	66,400	5,600	-----	3,800
NEW JERSEY	-	-	-	-	14,500	1,400	-----	500
NEW YORK	-	-	-	-	29,200	2,400	-----	1,900
PENNSYLVANIA	-	-	-	-	22,700	1,800	-----	800
EAST NORTH CENTRAL	-	-	-	-	52,200	3,900	-----	2,700
ILLINOIS	-	-	-	-	14,800	1,000	-----	600
INDIANA	-	-	-	-	5,800	600	-----	200
MICHIGAN	-	-	-	-	9,200	600	-----	300
OHIO	-	-	-	-	17,500	1,300	-----	1,100
WISCONSIN	-	-	-	-	5,000	500	-----	100
WEST NORTH CENTRAL	-	-	-	-	18,500	1,600	-----	500
IOWA	-	-	-	-	2,800	300	-----	-----
KANSAS	-	-	-	-	2,000	200	-----	-----
MINNESOTA	-	-	-	-	4,600	400	-----	200
MISSOURI	-	-	-	-	7,000	600	-----	200
NEBRASKA	-	-	-	-	1,500	100	-----	-----
NORTH DAKOTA	-	-	-	-	300	-----	-----	-----
SOUTH DAKOTA	-	-	-	-	400	-----	-----	-----
SOUTH ATLANTIC	-	-	-	-	39,300	3,200	-----	1,700
DELAWARE	-	-	-	-	2,100	300	-----	-----
DISTRICT OF COLUMBIA	-	-	-	-	5,900	500	-----	-----
FLORIDA	-	-	-	-	6,700	400	-----	500
GEORGIA	-	-	-	-	3,100	200	-----	-----
MARYLAND	-	-	-	-	7,600	600	-----	300
NORTH CAROLINA	-	-	-	-	3,700	300	-----	200
SOUTH CAROLINA	-	-	-	-	2,000	200	-----	-----
VIRGINIA	-	-	-	-	6,300	600	-----	200
WEST VIRGINIA	-	-	-	-	2,000	200	-----	-----

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CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY LEVELS OF HIGHEST DEGREE--CONTINUED

CS	TOTAL	HIGHEST DEGREE							
		DOCTORATE	PROFES- SIONAL MEDICAL	PROFES- SIONAL ENGINEER	MASTER'S	BACHELOR'S	LESS THAN BACHELOR'S DEGREE	OTHER	NO REPORT OF DEGREE
- - - -	308,000	24,500	100	13,200	71,100	185,300	9,400	400	4,000
- - - -	21,800	1,800	-----	900	6,300	11,500	800	-----	500
- - - -	6,600	400	-----	300	1,900	3,800	200	-----	-----
- - - -	700	100	-----	-----	100	400	-----	-----	-----
- - - -	12,300	1,100	-----	500	3,600	6,100	500	-----	400
- - - -	900	100	-----	-----	200	500	-----	-----	-----
- - - -	1,000	100	-----	-----	200	500	100	-----	-----
- - - -	500	-----	-----	-----	100	200	-----	-----	-----
- - - -	66,400	5,600	-----	3,600	17,900	36,600	1,900	100	700
- - - -	14,500	1,400	-----	900	4,500	7,100	400	-----	100
- - - -	29,200	2,400	-----	1,900	8,000	15,800	800	100	200
- - - -	22,700	1,800	-----	800	5,400	13,700	600	-----	400
- - - -	52,200	3,900	-----	2,200	11,200	32,300	1,900	-----	600
- - - -	14,800	1,000	-----	600	3,300	9,100	600	-----	300
- - - -	5,800	600	-----	200	1,100	3,700	200	-----	-----
- - - -	9,200	600	-----	300	2,400	5,700	300	-----	100
- - - -	17,500	1,300	-----	1,100	3,600	10,600	700	-----	200
- - - -	5,000	500	-----	100	800	3,300	200	-----	100
- - - -	18,500	1,600	-----	500	3,500	12,300	500	-----	200
- - - -	2,800	300	-----	-----	400	2,000	-----	-----	-----
- - - -	2,000	200	-----	100	300	1,300	100	-----	-----
- - - -	4,600	400	-----	200	800	3,100	100	-----	-----
- - - -	7,000	600	-----	200	1,600	4,400	200	-----	100
- - - -	1,500	100	-----	-----	300	1,000	-----	-----	-----
- - - -	300	-----	-----	-----	100	200	-----	-----	-----
- - - -	400	-----	-----	-----	100	300	-----	-----	-----
- - - -	39,300	3,200	-----	1,700	8,400	24,100	1,200	100	600
- - - -	2,100	300	-----	100	400	1,100	-----	-----	-----
A - - - -	5,900	500	-----	300	1,700	3,100	100	-----	100
- - - -	6,700	400	-----	500	1,200	4,300	300	-----	100
- - - -	3,100	200	-----	100	600	2,000	100	-----	-----
- - - -	7,600	600	-----	300	1,800	4,600	300	-----	100
- - - -	3,700	300	-----	200	600	2,400	100	-----	-----
- - - -	2,000	200	-----	100	300	1,300	100	-----	-----
- - - -	6,300	600	-----	200	1,400	3,800	100	-----	100
- - - -	2,000	200	-----	-----	400	1,300	100	-----	-----

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CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY LEVELS OF HIGHER EDUCATION

GENERAL CHARACTERISTICS	TOTAL	DOCTORATE	PROFES- SIONAL MEDICAL	PROFES- SIONAL ENGINEER	MASTER'S
GEOGRAPHIC LOCATION, CONTINUED					
EAST SOUTH CENTRAL - - - - -	11,900	900	-----	400	2,000
ALABAMA - - - - -	4,000	300	-----	100	
KENTUCKY - - - - -	1,900	100	-----	100	
MISSISSIPPI - - - - -	1,200	100	-----	-----	
TENNESSEE - - - - -	4,800	400	-----	200	
WEST SOUTH CENTRAL - - - - -	29,500	1,900	-----	900	4,000
ARKANSAS - - - - -	900	100	-----	-----	
LOUISIANA - - - - -	5,100	300	-----	200	
OKLAHOMA - - - - -	4,300	400	-----	100	
TEXAS - - - - -	19,200	1,200	-----	500	3,000
MOUNTAIN - - - - -	14,800	1,500	-----	1,000	3,000
ARIZONA - - - - -	3,100	300	-----	200	
COLORADO - - - - -	4,800	500	-----	500	1,000
IDAHO - - - - -	200	100	-----	-----	
MONTANA - - - - -	800	100	-----	-----	
NEVADA - - - - -	900	100	-----	100	
NEW MEXICO - - - - -	2,000	200	-----	100	
UTAH - - - - -	1,600	200	-----	100	
WYOMING - - - - -	500	-----	-----	-----	
PACIFIC - - - - -	50,700	3,800	-----	1,800	12,000
ALASKA - - - - -	600	-----	-----	-----	
CALIFORNIA - - - - -	41,400	3,200	-----	1,600	10,000
HAWAII - - - - -	1,000	100	-----	-----	
OREGON - - - - -	1,700	100	-----	100	
WASHINGTON - - - - -	6,000	400	-----	200	1,000
OUTLYING AREAS - - - - -	500	100	-----	-----	
CANAL ZONE - - - - -	-----	-----	-----	-----	
GUAM - - - - -	-----	-----	-----	-----	
PUERTO RICO - - - - -	500	100	-----	-----	
VIRGIN ISLANDS - - - - -	-----	-----	-----	-----	
FOREIGN - - - - -	2,200	200	-----	100	

NOTE - GROUPS MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY LEVELS OF HIGHEST DEGREE--CONTINUED

		HIGHEST DEGREE								
TOTAL		DOCTORATE	PROFES- SIONAL MEDICAL	PROFES- SIONAL ENGINEER	MASTER'S	BACHELOR'S	LESS THAN BACHELOR'S DEGREE	OTHER	NO REPORT OF DEGREE	
-	-	11,900	900	-----	400	2,200	8,000	300	-----	200
-	-	4,000	300	-----	100	700	2,800	-----	-----	-----
-	-	1,900	100	-----	100	400	1,200	100	-----	-----
-	-	1,200	100	-----	-----	100	800	100	-----	-----
-	-	4,800	400	-----	200	900	3,200	100	-----	100
-	-	29,500	1,900	-----	900	4,900	20,700	700	-----	400
-	-	900	100	-----	-----	100	600	100	-----	-----
-	-	5,100	300	-----	200	800	3,600	100	-----	100
-	-	4,300	400	-----	100	700	3,000	100	-----	-----
-	-	19,200	1,200	-----	500	3,300	13,500	400	-----	200
-	-	14,800	1,500	-----	1,000	3,200	8,500	400	-----	200
-	-	3,100	300	-----	200	700	1,800	100	-----	100
-	-	4,800	500	-----	500	1,200	2,600	100	-----	100
-	-	900	100	-----	-----	200	600	-----	-----	-----
-	-	800	100	-----	-----	100	600	-----	-----	-----
-	-	900	100	-----	100	200	600	-----	-----	-----
-	-	2,000	200	-----	100	500	1,100	100	-----	-----
-	-	1,600	200	-----	100	300	900	100	-----	-----
-	-	500	-----	-----	-----	100	300	-----	-----	-----
-	-	50,700	3,800	-----	1,800	12,700	29,800	1,700	100	700
-	-	600	-----	-----	-----	100	400	-----	-----	-----
-	-	41,400	3,200	-----	1,600	10,700	23,700	1,400	100	600
-	-	1,000	100	-----	-----	200	700	-----	-----	-----
-	-	1,700	100	-----	100	300	1,200	-----	-----	-----
-	-	6,000	400	-----	200	1,400	3,800	200	-----	100
-	-	500	100	-----	-----	100	300	-----	-----	-----
-	-	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	-	500	100	-----	-----	100	300	-----	-----	-----
-	-	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	-	2,200	200	-----	100	600	1,300	100	-----	-----

TOTAL BECAUSE OF ROUNDING.

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL  
CHARACTERISTICS OF ENGINEERS MEETING CRITERIA

GENERAL CHARACTERISTICS										TOTAL	19 AND UNDER	20-24
TOTAL ENGINEERS REPORTING - - - - -										508,000	-----	5,000
HIGHEST DEGREE												
DOCTORATE - - - - -										24,500	-----	-----
PROFESSIONAL MEDICAL - - - - -										100	-----	-----
PROFESSIONAL ENGINEER - - - - -										13,200	-----	200
MASTER'S - - - - -										71,100	-----	700
BACHELOR'S - - - - -										185,300	-----	4,200
LESS THAN BACHELOR'S - - - - -										9,400	-----	-----
OTHER - - - - -										400	-----	-----
NO REPORT - - - - -										4,000	-----	-----
CURRICULUM OF DEGREE												
AEROSPACE - - - - -										13,100	-----	500
CHEMICAL - - - - -										26,600	-----	200
CIVIL - - - - -										48,600	-----	700
ELECTRICAL - - - - -										65,500	-----	700
GENERAL - - - - -										26,300	-----	700
MECHANICAL - - - - -										58,500	-----	1,100
METALLURGICAL - - - - -										12,800	-----	1,000
MINERAL - - - - -										15,400	-----	500
OTHER - - - - -										34,300	-----	300
NO REPORT - - - - -										6,800	-----	-----
STUDENT STATUS												
FULL-TIME - - - - -										2,900	-----	500
PART-TIME - - - - -										11,700	-----	900
NO REPORT - - - - -										293,400	-----	3,700
PROFESSIONAL IDENTIFICATION												
ENGINEER - - - - -										254,700	-----	3,900
OTHER - - - - -										44,400	-----	900
NO REPORT - - - - -										8,800	-----	300
REGISTERED ENGINEERS												
YES - - - - -										131,100	-----	500
NO - - - - -										171,400	-----	4,400
NO REPORT - - - - -										5,400	-----	100
PROFESSIONAL EMPLOYMENT STATUS												
EMPLOYED FULL-TIME - - - - -										289,100	-----	4,400
EMPLOYED PART-TIME - - - - -										4,500	-----	200
UNEMPLOYED, SEEKING EMPLOY. - - - - -										2,000	-----	100
NOT EMPLOYED, NOT SEEKING - - - - -										1,900	-----	300
RETIRED - - - - -										8,900	-----	-----
NO REPORT - - - - -										1,600	-----	100

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CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY AGE

CHARACTERISTICS	TOTAL	A G E					
		19 AND UNDER	20-24	25-29	30-34	35-39	40-44
-----	308,000	-----	5,000	31,400	43,500	44,300	50,400
-----	24,500	-----	-----	1,800	5,200	4,800	3,600
-----	100	-----	-----	-----	-----	-----	-----
-----	13,200	-----	200	600	900	1,000	1,200
-----	71,100	-----	700	9,200	13,100	11,100	12,000
-----	185,300	-----	4,200	19,600	23,800	26,500	31,900
-----	9,400	-----	-----	100	300	700	1,400
-----	400	-----	-----	-----	-----	-----	100
-----	4,000	-----	-----	-----	100	100	300
-----	13,100	-----	500	1,600	2,000	1,900	2,200
-----	26,600	-----	200	3,400	3,700	3,600	3,600
-----	48,600	-----	700	6,900	7,800	7,300	7,200
-----	65,500	-----	200	2,300	7,900	10,400	13,300
-----	26,300	-----	700	3,300	4,200	4,100	4,200
-----	58,500	-----	1,100	7,500	8,300	7,400	9,300
-----	12,800	-----	1,000	1,900	1,900	1,700	1,500
-----	15,400	-----	500	1,000	2,100	2,600	2,900
-----	34,300	-----	300	3,300	5,400	5,100	5,800
-----	6,800	-----	-----	-----	100	300	500
-----	2,900	-----	500	1,300	500	200	100
-----	11,700	-----	900	3,400	3,300	1,800	1,100
-----	293,400	-----	3,700	26,700	39,600	42,300	49,200
ON	254,700	-----	3,900	26,100	36,400	37,100	42,100
-----	44,400	-----	900	4,200	6,000	6,000	7,000
-----	8,800	-----	300	1,000	1,200	1,200	1,300
-----	131,100	-----	500	5,500	13,800	15,900	22,300
-----	171,400	-----	4,400	25,300	29,000	27,600	27,400
-----	5,400	-----	100	600	700	700	700
TATUS	289,100	-----	4,400	29,500	42,400	43,700	49,700
-----	4,500	-----	200	700	400	200	200
EMPLOY.	2,000	-----	100	300	300	200	200
EKING	1,900	-----	300	600	300	100	100
-----	8,900	-----	-----	-----	-----	-----	-----
-----	1,600	-----	100	300	100	100	200



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CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY AGE--CON

GENERAL CHARACTERISTICS	45-49	50-54	55-59	60-
TOTAL ENGINEERS REPORTING - - - - -	48,900	31,300	21,400	14,700
HIGHEST DEGREE				
DOCTORATE - - - - -	3,600	2,000	1,200	1,000
PROFESSIONAL MEDICAL - - - - -	1,600	1,300	1,600	1,700
PROFESSIONAL ENGINEER - - - - -	10,500	5,900	3,900	2,300
MASTER'S - - - - -	31,000	19,300	12,600	7,900
BACHELOR'S - - - - -	1,800	2,100	1,300	1,000
LESS THAN BACHELOR'S - - - - -	100	100	100	100
OTHER - - - - -	400	600	700	800
NO REPORT - - - - -				
CURRICULUM OF DEGREE				
AEROSPACE - - - - -	2,500	1,300	600	300
CHEMICAL - - - - -	4,600	3,500	2,100	800
CIVIL - - - - -	5,600	3,400	3,400	2,600
ELECTRICAL - - - - -	11,500	7,200	5,100	4,200
GENERAL - - - - -	4,200	2,300	1,400	800
MECHANICAL - - - - -	10,500	5,800	3,800	2,100
METALLURGICAL - - - - -	1,800	1,400	600	500
MINERAL - - - - -	2,000	1,600	1,100	700
OTHER - - - - -	5,500	3,700	2,300	1,400
NO REPORT - - - - -	800	1,100	1,100	1,300
STUDENT STATUS				
FULL-TIME - - - - -	100	-----	-----	-----
PART-TIME - - - - -	700	300	100	-----
NO REPORT - - - - -	48,100	31,000	21,300	14,600
PROFESSIONAL IDENTIFICATION				
ENGINEER - - - - -	40,200	25,700	17,400	12,100
OTHER - - - - -	7,400	4,800	3,500	2,200
NO REPORT - - - - -	1,300	800	500	400
REGISTERED ENGINEERS				
YES - - - - -	23,700	16,400	12,600	9,500
NO - - - - -	24,500	14,300	8,500	4,900
NO REPORT - - - - -	800	600	400	300
PROFESSIONAL EMPLOYMENT STATUS				
EMPLOYED FULL-TIME - - - - -	48,100	30,600	20,400	12,800
EMPLOYED PART-TIME - - - - -	200	200	400	400
UNEMPLOYED, SEEKING EMPLOY. - - - - -	300	300	200	100
NOT EMPLOYED, NOT SEEKING - - - - -	100	100	100	100
RETIRED - - - - -	-----	100	300	1,100
NO REPORT - - - - -	200	100	100	100

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## CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY AGE--CONTINUED

	A G E						NO REPORT OF AGE
	45-49	50-54	55-59	60-64	65-69	70 AND OVER	
- - - - -	48,900	31,300	21,400	14,700	7,600	6,600	2,300
- - - - -	3,600	2,000	1,200	1,000	500	400	200
- - - - -	1,600	1,300	1,600	1,700	1,300	1,600	100
- - - - -	10,500	5,900	3,900	2,300	900	800	700
- - - - -	31,000	19,500	12,600	7,900	3,900	3,000	1,700
- - - - -	1,800	2,100	1,300	1,000	400	300	
- - - - -	100	100	100				
- - - - -	400	600	700	800	500	500	100
- - - - -	2,500	1,300	600	300	100	100	100
- - - - -	4,600	3,500	2,100	800	400	300	200
- - - - -	5,600	3,400	3,400	2,600	1,700	1,800	400
- - - - -	11,500	7,200	5,100	4,200	1,900	900	600
- - - - -	4,200	2,300	1,400	800	400	400	300
- - - - -	10,500	5,800	3,900	2,100	1,100	1,200	500
- - - - -	1,800	1,400	600	500	200	200	100
- - - - -	2,000	1,600	1,100	700	400	500	100
- - - - -	5,500	3,700	2,300	1,400	600	400	400
- - - - -	800	1,100	1,100	1,300	800	800	100
- - - - -	100						100
- - - - -	700	300	100				100
- - - - -	48,100	31,000	21,300	14,600	7,600	6,600	2,700
- - - - -	40,200	25,700	17,400	12,100	6,300	5,200	2,300
- - - - -	7,400	4,800	3,500	2,200	1,000	1,000	400
- - - - -	1,300	800	500	400	300	400	100
- - - - -	23,700	16,400	12,600	9,500	5,400	4,400	1,200
- - - - -	24,500	14,300	8,500	4,900	2,000	2,000	1,600
- - - - -	800	600	400	300	200	200	100
- - - - -	48,100	30,600	20,400	12,800	3,700	1,200	2,700
- - - - -	200	200	400	400	700	800	
- - - - -	300	300	200	100	100	100	
- - - - -	100	100	100	100	100	100	
- - - - -		100	300	1,100	3,000	4,300	100
- - - - -	200	100	100	100	100	100	

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CHARACTERISTICS OF ENGINEERS MEETING CRITERIA

GENERAL CHARACTERISTICS	TOTAL	19 AND UNDER	20 AND OVER
PRODUCTS OR SERVICES			
AGRICULTURE AND FOOD - - - - -	4,000	-----	-----
AIRCRAFT AND SPACE - - - - -	33,000	-----	-----
CERAMICS - - - - -	2,100	-----	-----
CHEMICALS, ALLIED PROD. - - - - -	15,500	-----	-----
COMMUNICATIONS - - - - -	7,700	-----	-----
COMPUTERS - - - - -	11,000	-----	-----
CONSTRUCTION, CIVIL ENGR. - - - - -	45,900	-----	-----
EDUC., INFORMATION SERV. - - - - -	14,600	-----	-----
ELECTRICAL EQUIP., SERV. - - - - -	19,200	-----	-----
ELECTRONIC EQUIP., SERV. - - - - -	23,000	-----	-----
LAB-SCI-PHOTO-OPT EQUIP. - - - - -	2,800	-----	-----
MACHINERY, MECH. EQUIP. - - - - -	28,400	-----	-----
MARINE TRANSPORTATION - - - - -	4,800	-----	-----
MEDICAL, HEALTH SERVICES - - - - -	1,300	-----	-----
METALS, BASIC - - - - -	12,600	-----	-----
METAL FABRICATED PROD. - - - - -	6,300	-----	-----
MINING - - - - -	5,900	-----	-----
MOTOR VEHICLE TRANS. - - - - -	2,500	-----	-----
ORDNANCE - - - - -	5,200	-----	-----
PETROLEUM - - - - -	15,500	-----	-----
RAILWAY, RAPID TRANSIT - - - - -	1,500	-----	-----
UTILITIES - - - - -	14,700	-----	-----
OTHER PRODUCTS, SERVICES - - - - -	11,300	-----	-----
NO REPORT - - - - -	15,200	-----	-----
AREAS OF TECHNOLOGY			
BIOMEDICAL - - - - -	1,600	-----	-----
BEHAVIORAL AND SOCIAL - - - - -	4,100	-----	-----
CHEMICAL AND MATERIALS - - - - -	11,700	-----	-----
METALLURGICAL - - - - -	12,100	-----	-----
EARTH, ATMOSPHERE, MARINE - - - - -	9,900	-----	-----
ENVIRONMENTAL, STRUCTURAL - - - - -	33,700	-----	-----
ELECTROMAGNETIC - - - - -	42,800	-----	-----
DYNAMICS AND MECHANICS - - - - -	40,100	-----	-----
HEAT, LIGHT, APPL. PHYSICS - - - - -	8,500	-----	-----
NUCLEAR - - - - -	2,600	-----	-----
ENGR. PROCESS-APPLICATION - - - - -	32,100	-----	-----
AUTOMATION AND CONTROL - - - - -	12,400	-----	-----
WORK MGMT, EVALUATION - - - - -	56,500	-----	-----
INFORMATION, MATHEMATICS - - - - -	11,500	-----	-----
OTHER - - - - -	9,700	-----	-----
NO REPORT - - - - -	18,700	-----	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969  
CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY AGE--CONTINUED

CHARACTERISTICS	TOTAL	A G E					
		19 AND UNDER	20-24	25-29	30-34	35-39	40-44
FOOD - - - - -	4,000	-----	-----	500	600	600	600
CE - - - - -	33,000	-----	900	3,500	5,100	5,500	6,100
- - - - -	2,100	-----	-----	200	400	300	200
D PROD. - - - - -	15,500	-----	200	3,000	2,800	2,700	2,700
- - - - -	7,700	-----	-----	400	1,000	1,200	1,400
- - - - -	11,000	-----	200	1,300	2,500	2,300	2,300
IL ENGR. - - - - -	45,900	-----	500	5,900	7,500	6,800	7,400
ON SERV. - - - - -	14,600	-----	100	1,000	2,200	2,300	2,000
., SERV. - - - - -	15,200	-----	100	900	1,800	2,300	3,700
., SERV. - - - - -	23,000	-----	100	1,200	3,400	4,700	5,000
T EQUIP. - - - - -	2,800	-----	-----	200	400	500	500
EQUIP. - - - - -	28,400	-----	400	3,100	3,700	3,500	4,900
ATION - - - - -	4,800	-----	200	700	600	600	800
SERVICES - - - - -	1,300	-----	-----	200	300	200	200
- - - - -	12,600	-----	600	1,900	1,800	1,700	1,600
PROD. - - - - -	6,300	-----	100	700	800	700	1,100
- - - - -	5,900	-----	100	400	700	700	1,000
ANS. - - - - -	2,500	-----	-----	500	400	400	300
- - - - -	5,200	-----	100	600	800	900	800
- - - - -	15,500	-----	300	1,500	2,100	2,400	2,900
RANSIT - - - - -	1,500	-----	-----	100	200	200	200
- - - - -	14,700	-----	100	1,100	1,600	1,700	2,500
SERVICES - - - - -	11,300	-----	100	1,300	1,800	1,700	1,800
- - - - -	15,200	-----	500	1,300	900	600	600
- - - - -	1,600	-----	-----	200	300	300	200
OCIAL - - - - -	4,100	-----	-----	300	600	600	600
ERIALS - - - - -	11,700	-----	200	1,500	1,800	1,300	1,600
- - - - -	12,100	-----	600	1,800	1,700	1,700	1,500
,MARINE - - - - -	9,900	-----	300	700	1,300	1,400	1,600
RUCTURAL - - - - -	33,700	-----	400	4,300	5,400	5,100	5,500
- - - - -	42,800	-----	200	1,800	4,800	6,400	8,300
HANICS - - - - -	40,100	-----	700	5,000	6,500	5,700	6,300
PHYSICS - - - - -	8,500	-----	200	800	1,600	1,200	1,600
- - - - -	2,600	-----	-----	300	300	500	500
LICATION - - - - -	32,100	-----	400	3,400	4,200	4,500	5,400
ONTROL - - - - -	12,400	-----	100	900	1,900	2,000	2,800
TION - - - - -	56,500	-----	1,000	6,400	8,200	8,800	9,900
EMATICS - - - - -	11,500	-----	200	1,600	2,500	2,200	1,900
- - - - -	9,700	-----	100	1,000	1,300	1,500	1,500
- - - - -	18,700	-----	500	1,400	1,200	1,000	1,200

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY AGE--

GENERAL CHARACTERISTICS	45-49	50-54	55-59
PRODUCTS OR SERVICES			
AGRICULTURE AND FOOD - - - - -	500	500	400
AIRCRAFT AND SPACE - - - - -	6,000	3,300	1,600
CERAMICS - - - - -	400	200	100
CHEMICALS, ALLIED PROD. - - - - -	3,500	2,500	1,300
COMMUNICATIONS - - - - -	1,400	900	600
COMPUTERS - - - - -	1,400	600	300
CONSTRUCTION-CIVIL ENGR. - - - - -	6,200	3,500	3,400
EDUC., INFORMATION SERV. - - - - -	2,500	1,700	1,200
ELECTRICAL EQUIP., SERV. - - - - -	3,700	2,600	1,800
ELECTRONIC EQUIP., SERV. - - - - -	4,100	2,300	1,200
LAB-SCI-PHOTO-OPT EQUIP. - - - - -	400	300	200
MACHINERY, MECH. EQUIP. - - - - -	4,700	3,400	2,200
MARINE TRANSPORTATION - - - - -	600	500	300
MEDICAL, HEALTH SERVICES - - - - -	200	100	-----
METALS, BASIC - - - - -	2,000	1,400	1,000
METAL FABRICATED PROD. - - - - -	1,200	700	500
MINING - - - - -	800	800	600
MOTOR VEHICLE TRANS. - - - - -	300	200	200
ORONANCE - - - - -	900	500	300
PETROLEUM - - - - -	2,700	1,700	1,000
RAILWAY, RAPID TRANSIT - - - - -	200	200	200
UTILITIES - - - - -	2,600	1,700	1,400
OTHER PRODUCTS, SERVICES - - - - -	1,900	1,000	800
NO REPORT - - - - -	700	600	700
AREAS OF TECHNOLOGY			
BIOMEDICAL - - - - -	300	100	100
BEHAVIORAL AND SOCIAL - - - - -	700	400	500
CHEMICAL AND MATERIALS - - - - -	1,900	1,600	900
METALLURGICAL - - - - -	1,800	1,200	900
EARTH, ATMOSPHERE, MARINE - - - - -	1,500	1,100	900
ENVIRONMENTAL, STRUCTURAL - - - - -	4,500	2,600	2,500
ELECTROMAGNETIC - - - - -	8,100	5,300	3,600
DYNAMICS AND MECHANICS - - - - -	6,900	4,100	2,400
HEAT, LIGHT, APPL. PHYSICS - - - - -	1,200	900	400
NUCLEAR - - - - -	400	200	100
ENGR. PROCESS-APPLICATION - - - - -	5,400	3,500	2,600
AUTOMATION AND CONTROL - - - - -	2,000	1,300	800
WORK MGMT, EVALUATION - - - - -	9,800	6,000	3,500
INFORMATION, MATHEMATICS - - - - -	1,400	700	500
OTHER - - - - -	1,700	1,000	700
NO REPORT - - - - -	1,400	1,100	1,000

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969  
 CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY AGE--CONTINUED

	A G E						NO REPORT OF AGE
	45-49	50-54	55-59	60-64	65-69	70 AND OVER	
- - - - -	500	500	400	200	100	-----	100
- - - - -	6,000	3,300	1,600	700	100	-----	300
- - - - -	400	200	100	100	-----	-----	-----
- - - - -	3,500	2,500	1,300	500	100	-----	200
- - - - -	1,400	900	600	600	100	-----	100
- - - - -	1,400	600	300	100	-----	-----	100
- - - - -	6,200	3,500	3,400	2,400	1,000	700	500
- - - - -	2,500	1,700	1,200	1,000	400	200	100
- - - - -	3,700	2,600	1,800	1,500	500	100	200
- - - - -	4,100	2,300	1,200	600	100	-----	200
- - - - -	400	300	200	200	100	-----	-----
- - - - -	4,700	3,400	2,200	1,400	500	300	300
- - - - -	600	500	300	200	100	100	100
- - - - -	200	100	-----	-----	-----	-----	-----
- - - - -	2,000	1,400	1,000	500	200	100	100
- - - - -	1,200	700	500	300	100	-----	100
- - - - -	800	800	600	300	200	100	100
- - - - -	300	200	200	100	-----	-----	-----
- - - - -	900	500	300	100	-----	-----	-----
- - - - -	2,700	1,700	1,000	500	100	100	100
- - - - -	200	200	200	100	-----	-----	-----
- - - - -	2,600	1,700	1,400	1,300	400	100	200
- - - - -	1,900	1,000	800	500	100	100	100
- - - - -	700	600	700	1,500	3,200	4,500	200
- - - - -	300	100	100	100	-----	-----	-----
- - - - -	700	400	500	300	100	-----	-----
- - - - -	1,900	1,600	900	500	200	100	100
- - - - -	1,800	1,200	900	600	200	-----	100
- - - - -	1,500	1,100	900	500	300	100	100
- - - - -	4,500	2,600	2,500	1,700	700	500	300
- - - - -	8,100	5,300	3,600	3,000	800	200	400
- - - - -	6,900	4,100	2,400	1,200	500	300	300
- - - - -	1,200	900	400	300	200	-----	100
- - - - -	400	200	100	100	-----	-----	-----
- - - - -	5,400	3,500	2,600	1,600	500	300	300
- - - - -	2,000	1,300	800	500	100	-----	100
- - - - -	9,800	6,000	3,500	1,800	500	100	500
- - - - -	1,400	700	500	200	100	100	100
- - - - -	1,700	1,000	700	500	100	100	100
- - - - -	1,400	1,100	1,000	1,800	3,300	4,500	200

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
CHARACTERISTICS OF ENGINEERS MEETING CRITERIA

GENERAL CHARACTERISTICS										TOTAL	19 AND UNDER
TYPE OF EMPLOYER											
PRIV. INDUSTRY, BUSINESS	-	-	-	-	-	-	-	-	-	211,100	-----
SELF-EMPLOYED	-	-	-	-	-	-	-	-	-	11,400	-----
COLLEGE, UNIVERSITY	-	-	-	-	-	-	-	-	-	20,200	-----
JR. COLLEGE, TECH. INST.	-	-	-	-	-	-	-	-	-	900	-----
SEC., ELEM., OTHER SCHOOL	-	-	-	-	-	-	-	-	-	300	-----
NONPROFIT ORGANIZATION	-	-	-	-	-	-	-	-	-	5,400	-----
FEDERAL GOVERNMENT	-	-	-	-	-	-	-	-	-	24,600	-----
USPHS, MILITARY SERVICE	-	-	-	-	-	-	-	-	-	4,900	-----
STATE GOVERNMENT	-	-	-	-	-	-	-	-	-	5,900	-----
LOCAL GOVERNMENT	-	-	-	-	-	-	-	-	-	4,800	-----
OTHER	-	-	-	-	-	-	-	-	-	4,600	-----
NO REPORT	-	-	-	-	-	-	-	-	-	14,000	-----
FUNCTIONS											
DESIGN	-	-	-	-	-	-	-	-	-	53,600	-----
DEVELOPMENT	-	-	-	-	-	-	-	-	-	32,300	-----
RESEARCH	-	-	-	-	-	-	-	-	-	22,000	-----
PRODUCTION	-	-	-	-	-	-	-	-	-	56,600	-----
CONTROL	-	-	-	-	-	-	-	-	-	104,700	-----
TEACHING	-	-	-	-	-	-	-	-	-	14,700	-----
OTHER	-	-	-	-	-	-	-	-	-	6,200	-----
NO REPORT	-	-	-	-	-	-	-	-	-	17,900	-----
SUPERVISORY LEVEL											
NO REG. SUPV. GIVEN	-	-	-	-	-	-	-	-	-	52,200	-----
INDIRECT OR STAFF	-	-	-	-	-	-	-	-	-	50,400	-----
TEAM OR UNIT	-	-	-	-	-	-	-	-	-	33,900	-----
PROJECT OR SECTION	-	-	-	-	-	-	-	-	-	61,700	-----
MAJOR DEPT., DIV., PROGRAM	-	-	-	-	-	-	-	-	-	56,900	-----
GEN. MGMT OF ORGANIZATION	-	-	-	-	-	-	-	-	-	28,800	-----
NO REPORT	-	-	-	-	-	-	-	-	-	24,000	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969  
CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY AGE--CONTINUED

CHARACTERISTICS	TOTAL	A G E					
		19 AND UNDER	20-24	25-29	30-34	35-39	40-44
BUSINESS - - - - -	211,100	-----	3,100	21,500	30,300	32,200	38,200
- - - - -	11,400	-----	-----	300	700	1,200	2,000
TY - - - - -	20,200	-----	300	2,000	3,500	3,400	7,700
INST. - - - - -	900	-----	-----	100	100	100	100
SCHOOL - - - - -	300	-----	-----	-----	-----	-----	-----
ZATION - - - - -	5,400	-----	-----	300	800	800	1,000
NT - - - - -	24,600	-----	400	2,400	4,000	3,400	3,400
ERVICE - - - - -	4,900	-----	600	1,700	800	600	500
- - - - -	5,900	-----	100	1,000	1,100	900	800
- - - - -	4,800	-----	-----	500	900	700	700
- - - - -	4,600	-----	100	600	600	600	600
- - - - -	14,000	-----	400	1,100	700	400	400
- - - - -	53,600	-----	1,000	7,000	8,800	8,500	9,200
- - - - -	32,300	-----	700	4,600	5,900	5,700	5,300
- - - - -	22,000	-----	500	3,500	4,800	3,500	3,000
- - - - -	56,600	-----	1,100	6,200	7,700	8,200	10,100
- - - - -	104,700	-----	900	6,800	11,800	14,200	19,000
- - - - -	14,700	-----	100	1,100	2,500	2,500	2,000
- - - - -	6,200	-----	200	800	800	800	900
- - - - -	17,900	-----	500	1,300	1,100	900	1,000
VEN - - - - -	52,200	-----	2,400	11,100	9,300	6,800	5,800
F - - - - -	50,400	-----	900	7,300	8,700	7,600	7,600
- - - - -	33,900	-----	500	3,900	6,700	6,400	5,800
ON - - - - -	61,700	-----	500	5,200	10,300	11,100	11,600
, PROGRAM - - - - -	56,900	-----	100	1,400	4,800	7,700	12,200
NIZATION - - - - -	28,800	-----	-----	500	1,600	2,900	5,700
- - - - -	24,000	-----	500	1,900	1,900	1,700	1,800



NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY AGE--CON

GENERAL CHARACTERISTICS		45-49	50-54	55-59	60-
TYPE OF EMPLOYER					
PRIV. INDUSTRY, BUSINESS	- - - - -	35,800	22,400	14,200	8,000
SELF-EMPLOYED	- - - - -	1,900	1,400	1,100	1,000
COLLEGE, UNIVERSITY	- - - - -	3,100	2,000	1,400	1,000
JR. COLLEGE, TECH. INST.	- - - - -	200	200	100	
SEC., ELEM., OTHER SCHOOL	- - - - -			100	
NONPROFIT ORGANIZATION	- - - - -	1,100	500	400	
FEDERAL GOVERNMENT	- - - - -	3,800	2,800	2,200	1,000
USPHS, MILITARY SERVICE	- - - - -	400	100		
STATE GOVERNMENT	- - - - -	600	400	500	
LOCAL GOVERNMENT	- - - - -	700	400	300	
OTHER	- - - - -	700	400	400	
NO REPORT	- - - - -	600	500	700	1,000
FUNCTIONS					
DESIGN	- - - - -	7,800	4,800	3,200	1,000
DEVELOPMENT	- - - - -	4,500	2,700	1,500	
RESEARCH	- - - - -	3,000	1,500	1,100	
PRODUCTION	- - - - -	9,000	6,100	4,200	2,000
CONTROL	- - - - -	19,900	12,900	8,800	5,000
TEACHING	- - - - -	2,400	1,600	1,100	
OTHER	- - - - -	1,000	600	500	
NO REPORT	- - - - -	1,200	1,000	1,000	1,000
SUPERVISORY LEVEL					
NO REG. SUPV. GIVEN	- - - - -	5,700	3,900	2,800	2,000
INDIRECT OR STAFF	- - - - -	7,000	4,800	3,300	2,000
TEAM OR UNIT	- - - - -	5,000	2,600	1,600	1,000
PROJECT OR SECTION	- - - - -	10,000	5,800	3,800	2,000
MAJOR DEPT., DIV., PROGRAM	- - - - -	12,700	8,000	5,300	3,000
GEN. MGMT OF ORGANIZATION	- - - - -	6,300	4,600	3,100	2,000
NO REPORT	- - - - -	2,300	1,500	1,600	2,000

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969  
 CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY AGE--CONTINUED

	A G E						NO REPORT OF AGE
	45-49	50-54	55-59	60-64	65-69	70 AND OVER	
ES							
- - - - -	35,800	22,400	14,200	8,300	2,200	900	2,000
- - - - -	1,900	1,400	1,100	1,000	900	800	100
- - - - -	3,100	2,000	1,400	1,100	400	100	100
- - - - -	200	200	100	100	-----	-----	-----
- - - - -	-----	-----	100	-----	-----	-----	-----
- - - - -	1,100	500	400	300	100	100	-----
- - - - -	3,800	2,800	2,200	1,400	400	100	200
- - - - -	400	100	-----	-----	-----	-----	-----
- - - - -	600	400	500	400	100	100	100
- - - - -	700	400	300	300	100	-----	100
- - - - -	700	400	400	300	100	100	100
- - - - -	600	500	700	1,400	3,200	4,500	100
- - - - -	7,800	4,800	3,200	1,800	700	300	500
- - - - -	4,500	2,700	1,500	800	100	-----	300
- - - - -	3,000	1,500	1,100	800	100	100	200
- - - - -	9,000	6,100	4,200	2,400	700	300	500
- - - - -	19,900	12,900	8,800	5,800	2,200	1,300	1,000
- - - - -	2,400	1,600	1,100	900	300	100	100
- - - - -	1,000	600	500	400	100	-----	-----
- - - - -	1,200	1,000	1,000	1,800	3,300	4,500	200
- - - - -	5,700	3,900	2,800	2,200	1,100	600	600
- - - - -	7,000	4,800	3,300	2,000	500	200	400
- - - - -	5,000	2,600	1,600	1,000	200	-----	300
- - - - -	10,000	5,800	3,800	2,200	500	200	600
- - - - -	12,700	8,000	5,300	3,200	700	200	500
- - - - -	6,300	4,600	3,100	2,100	1,000	700	200
- - - - -	2,300	1,500	1,600	2,100	3,600	4,700	200

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
CHARACTERISTICS OF ENGINEERS MEETING C

GENERAL CHARACTERISTICS	TOTAL	19 AND UNDER
ALL GEOGRAPHIC LOCATIONS - - - - -	308,000	-----
NEW ENGLAND - - - - -	21,800	-----
CONNECTICUT - - - - -	6,600	-----
MAINE - - - - -	700	-----
MASSACHUSETTS - - - - -	12,300	-----
NEW HAMPSHIRE - - - - -	900	-----
RHODE ISLAND - - - - -	1,000	-----
VERMONT - - - - -	500	-----
MIDDLE ATLANTIC - - - - -	66,400	-----
NEW JERSEY - - - - -	14,500	-----
NEW YORK - - - - -	29,200	-----
PENNSYLVANIA - - - - -	22,700	-----
EAST NORTH CENTRAL - - - - -	52,200	-----
ILLINOIS - - - - -	14,800	-----
INDIANA - - - - -	5,800	-----
MICHIGAN - - - - -	5,200	-----
OHIO - - - - -	17,500	-----
WISCONSIN - - - - -	5,000	-----
WEST NORTH CENTRAL - - - - -	18,500	-----
IOWA - - - - -	2,800	-----
KANSAS - - - - -	2,000	-----
MINNESOTA - - - - -	4,600	-----
MISSOURI - - - - -	7,000	-----
NEBRASKA - - - - -	1,500	-----
NORTH DAKOTA - - - - -	300	-----
SOUTH DAKOTA - - - - -	400	-----
SOUTH ATLANTIC - - - - -	39,300	-----
DELAWARE - - - - -	2,100	-----
DISTRICT OF COLUMBIA - - - - -	5,900	-----
FLORIDA - - - - -	6,700	-----
GEORGIA - - - - -	3,100	-----
MARYLAND - - - - -	7,600	-----
NORTH CAROLINA - - - - -	3,700	-----
SOUTH CAROLINA - - - - -	2,000	-----
VIRGINIA - - - - -	6,300	-----
WEST VIRGINIA - - - - -	2,000	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969  
CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY AGE--CONTINUED

CHARACTERISTICS	TOTAL	A G E					
		19 AND UNDER	20-24	25-29	30-34	35-39	40-44
S - - - - -	308,000	-----	5,000	31,400	43,500	44,300	50,400
- - - - -	21,800	-----	500	2,300	3,100	3,100	3,300
- - - - -	6,600	-----	200	800	900	900	1,000
- - - - -	700	-----	-----	100	100	100	100
- - - - -	12,300	-----	200	1,100	1,800	1,700	1,900
- - - - -	900	-----	-----	100	100	100	100
- - - - -	1,000	-----	-----	100	100	100	200
- - - - -	500	-----	-----	-----	100	100	-----
- - - - -	66,400	-----	1,200	6,300	8,500	8,700	11,500
- - - - -	14,500	-----	200	1,400	2,000	2,000	2,400
- - - - -	29,200	-----	600	2,400	3,500	3,800	5,100
- - - - -	22,700	-----	400	2,400	2,900	2,900	4,000
- - - - -	52,200	-----	900	6,000	7,300	6,900	8,400
- - - - -	14,800	-----	300	1,700	2,100	1,800	2,300
- - - - -	5,800	-----	100	600	1,000	900	800
- - - - -	5,200	-----	200	1,000	1,200	1,300	1,500
- - - - -	17,500	-----	300	2,100	2,300	2,300	2,800
- - - - -	5,000	-----	-----	500	700	700	900
- - - - -	18,500	-----	300	2,100	3,000	3,200	2,900
- - - - -	2,800	-----	-----	400	500	600	400
- - - - -	2,000	-----	-----	200	200	300	400
- - - - -	4,600	-----	100	500	700	900	800
- - - - -	7,000	-----	100	700	1,200	1,100	1,000
- - - - -	1,500	-----	-----	200	300	200	200
- - - - -	300	-----	-----	-----	100	-----	100
- - - - -	400	-----	-----	-----	100	100	100
- - - - -	39,300	-----	700	4,100	5,500	5,400	5,800
- - - - -	2,100	-----	-----	200	200	300	300
MBIA - - - - -	5,900	-----	-----	300	700	800	700
- - - - -	6,700	-----	300	600	800	1,000	1,000
- - - - -	3,100	-----	100	400	600	400	500
- - - - -	7,600	-----	100	800	1,000	1,000	1,200
- - - - -	3,700	-----	-----	500	600	600	600
- - - - -	2,000	-----	-----	300	400	200	300
- - - - -	6,300	-----	100	700	1,000	800	900
- - - - -	2,000	-----	-----	200	300	300	300

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL  
CHARACTERISTICS OF ENGINEERS MEETING CRITERIA

GENERAL CHARACTERISTICS										45-49	50-54	55+
ALL GEOGRAPHIC LOCATIONS	-	-	-	-	-	-	-	-	-	48,900	31,300	21,000
NEW ENGLAND	-	-	-	-	-	-	-	-	-	3,300	2,200	1,000
CONNECTICUT	-	-	-	-	-	-	-	-	-	900	800	
MAINE	-	-	-	-	-	-	-	-	-	100		
MASSACHUSETTS	-	-	-	-	-	-	-	-	-	2,000	1,200	
NEW HAMPSHIRE	-	-	-	-	-	-	-	-	-	100	100	
RHODE ISLAND	-	-	-	-	-	-	-	-	-	100	100	
VERMONT	-	-	-	-	-	-	-	-	-	100		
MIDDLE ATLANTIC	-	-	-	-	-	-	-	-	-	10,700	7,100	4,000
NEW JERSEY	-	-	-	-	-	-	-	-	-	2,300	1,500	1,000
NEW YORK	-	-	-	-	-	-	-	-	-	4,900	3,100	2,000
PENNSYLVANIA	-	-	-	-	-	-	-	-	-	3,500	2,500	1,000
EAST NORTH CENTRAL	-	-	-	-	-	-	-	-	-	8,300	5,500	3,000
ILLINOIS	-	-	-	-	-	-	-	-	-	2,100	1,600	1,000
INDIANA	-	-	-	-	-	-	-	-	-	900	600	
MICHIGAN	-	-	-	-	-	-	-	-	-	1,500	900	
OHIO	-	-	-	-	-	-	-	-	-	3,000	1,900	1,000
WISCONSIN	-	-	-	-	-	-	-	-	-	800	600	
WEST NORTH CENTRAL	-	-	-	-	-	-	-	-	-	2,800	1,500	
IOWA	-	-	-	-	-	-	-	-	-	400	200	
KANSAS	-	-	-	-	-	-	-	-	-	300	200	
MINNESOTA	-	-	-	-	-	-	-	-	-	700	300	
MISSOURI	-	-	-	-	-	-	-	-	-	1,100	700	
NEBRASKA	-	-	-	-	-	-	-	-	-	200	100	
NORTH DAKOTA	-	-	-	-	-	-	-	-	-			
SOUTH DAKOTA	-	-	-	-	-	-	-	-	-			
SOUTH ATLANTIC	-	-	-	-	-	-	-	-	-	6,200	4,100	3,000
DELAWARE	-	-	-	-	-	-	-	-	-	400	300	
DISTRICT OF COLUMBIA	-	-	-	-	-	-	-	-	-	1,100	700	
FLORIDA	-	-	-	-	-	-	-	-	-	1,000	700	
GEORGIA	-	-	-	-	-	-	-	-	-	400	300	
MARYLAND	-	-	-	-	-	-	-	-	-	1,300	800	
NORTH CAROLINA	-	-	-	-	-	-	-	-	-	500	300	
SOUTH CAROLINA	-	-	-	-	-	-	-	-	-	300	200	
VIRGINIA	-	-	-	-	-	-	-	-	-	900	600	
WEST VIRGINIA	-	-	-	-	-	-	-	-	-	300	300	

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969  
 CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY AGE--CONTINUED

CHARACTERISTICS	A G E						NO REPORT OF AGE
	45-49	50-54	55-59	60-64	65-69	70 AND OVER	
-----	48,900	31,300	21,400	14,700	7,600	6,600	2,800
-----	3,300	2,200	1,500	1,100	700	600	200
-----	900	800	400	300	200	200	100
-----	100	-----	100	-----	-----	-----	-----
-----	2,000	1,200	900	700	300	300	100
-----	100	100	100	100	-----	100	-----
-----	100	100	100	-----	-----	-----	-----
-----	100	-----	-----	-----	-----	-----	-----
-----	10,700	7,100	4,900	3,500	1,800	1,700	700
-----	2,300	1,500	1,100	700	400	400	100
-----	4,900	3,100	2,200	1,700	800	800	300
-----	3,500	2,500	1,600	1,200	600	500	300
-----	8,300	5,500	3,800	2,400	1,300	1,000	400
-----	2,100	1,600	1,200	900	400	300	100
-----	900	600	300	200	200	100	100
-----	1,500	900	700	400	200	200	100
-----	3,000	1,900	1,200	800	400	300	100
-----	800	600	300	200	100	100	-----
-----	2,800	1,500	900	800	400	400	200
-----	400	200	100	100	100	-----	-----
-----	300	200	100	200	-----	-----	-----
-----	700	300	200	200	100	100	-----
-----	1,100	700	400	300	200	200	100
-----	200	100	100	100	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----
-----	6,200	4,100	3,000	2,000	1,200	1,100	300
-----	400	300	200	100	-----	-----	-----
IA -----	1,100	700	700	400	200	100	-----
-----	1,000	700	400	400	300	400	-----
-----	400	300	200	100	100	100	-----
-----	1,300	800	600	300	200	200	100
-----	500	300	200	200	100	100	-----
-----	300	200	100	100	100	100	-----
-----	900	600	400	300	200	200	100
-----	300	300	200	-----	-----	-----	-----

NATIONAL REGISTER OF SCIENTIFIC AND  
CHARACTERISTICS OF ENGINEERS MEETING

GENERAL CHARACTERISTICS											TOTAL	19 AND UNDER
GEOGRAPHIC LOCATION, CONTINUED												
EAST SOUTH CENTRAL	-	-	-	-	-	-	-	-	-	-	11,900	-----
ALABAMA	-	-	-	-	-	-	-	-	-	-	4,000	-----
KENTUCKY	-	-	-	-	-	-	-	-	-	-	1,900	-----
MISSISSIPPI	-	-	-	-	-	-	-	-	-	-	1,200	-----
TENNESSEE	-	-	-	-	-	-	-	-	-	-	4,800	-----
WEST SOUTH CENTRAL	-	-	-	-	-	-	-	-	-	-	29,500	-----
ARKANSAS	-	-	-	-	-	-	-	-	-	-	900	-----
LOUISIANA	-	-	-	-	-	-	-	-	-	-	5,100	-----
OKLAHOMA	-	-	-	-	-	-	-	-	-	-	4,300	-----
TEXAS	-	-	-	-	-	-	-	-	-	-	19,200	-----
MOUNTAIN	-	-	-	-	-	-	-	-	-	-	14,800	-----
ARIZONA	-	-	-	-	-	-	-	-	-	-	3,100	-----
COLORADO	-	-	-	-	-	-	-	-	-	-	4,800	-----
IDAHO	-	-	-	-	-	-	-	-	-	-	900	-----
MONTANA	-	-	-	-	-	-	-	-	-	-	800	-----
NEVADA	-	-	-	-	-	-	-	-	-	-	900	-----
NEW MEXICO	-	-	-	-	-	-	-	-	-	-	2,000	-----
UTAH	-	-	-	-	-	-	-	-	-	-	1,600	-----
WYOMING	-	-	-	-	-	-	-	-	-	-	500	-----
PACIFIC	-	-	-	-	-	-	-	-	-	-	50,700	-----
ALASKA	-	-	-	-	-	-	-	-	-	-	600	-----
CALIFORNIA	-	-	-	-	-	-	-	-	-	-	41,400	-----
HAWAII	-	-	-	-	-	-	-	-	-	-	1,000	-----
OREGON	-	-	-	-	-	-	-	-	-	-	1,700	-----
WASHINGTON	-	-	-	-	-	-	-	-	-	-	6,000	-----
OUTLYING AREAS	-	-	-	-	-	-	-	-	-	-	500	-----
CANAL ZONE	-	-	-	-	-	-	-	-	-	-	-----	-----
GUAM	-	-	-	-	-	-	-	-	-	-	-----	-----
PUERTO RICO	-	-	-	-	-	-	-	-	-	-	500	-----
VIRGIN ISLANDS	-	-	-	-	-	-	-	-	-	-	-----	-----
FOREIGN	-	-	-	-	-	-	-	-	-	-	2,200	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969  
CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY AGE--CONTINUED

CHARACTERISTICS	TOTAL	A G E					
		19 AND UNDER	20-24	25-29	30-34	35-39	40-44
ED							
- - - - -	11,900	-----	200	1,500	1,800	1,900	1,800
- - - - -	4,000	-----	-----	300	600	700	700
- - - - -	1,900	-----	-----	300	300	300	300
- - - - -	1,200	-----	-----	200	300	100	200
- - - - -	4,800	-----	100	700	600	700	700
- - - - -	29,500	-----	500	2,900	4,300	4,700	5,400
- - - - -	900	-----	-----	100	100	100	100
- - - - -	5,100	-----	200	600	800	900	800
- - - - -	4,300	-----	-----	300	600	600	900
- - - - -	19,200	-----	300	1,800	2,800	3,100	3,700
- - - - -	14,800	-----	200	1,500	2,000	2,400	2,300
- - - - -	3,100	-----	-----	200	500	500	500
- - - - -	4,800	-----	100	500	600	800	700
- - - - -	900	-----	-----	100	100	200	200
- - - - -	800	-----	-----	100	100	100	100
- - - - -	900	-----	-----	100	100	200	200
- - - - -	2,000	-----	-----	300	300	300	400
- - - - -	1,600	-----	-----	200	200	200	300
- - - - -	500	-----	-----	100	100	100	100
- - - - -	50,700	-----	500	4,100	7,500	7,700	8,600
- - - - -	600	-----	-----	100	100	100	100
- - - - -	41,400	-----	400	3,200	6,000	6,300	7,200
- - - - -	1,000	-----	-----	100	200	100	200
- - - - -	1,700	-----	-----	100	300	300	200
- - - - -	6,000	-----	-----	600	1,000	900	900
- - - - -	500	-----	-----	100	100	100	100
- - - - -	-----	-----	-----	-----	-----	-----	-----
- - - - -	500	-----	-----	100	100	100	100
- - - - -	-----	-----	-----	-----	-----	-----	-----
- - - - -	2,200	-----	100	500	400	300	400



NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY

GENERAL CHARACTERISTICS

45-49

50-54

55-59

GEOGRAPHIC LOCATION, CONTINUED

EAST SOUTH CENTRAL - - - - -	1,700	1,000	800
ALABAMA - - - - -	700	300	300
KENTUCKY - - - - -	200	200	100
MISSISSIPPI - - - - -	100	100	100
TENNESSEE - - - - -	700	500	400
WEST SOUTH CENTRAL - - - - -	4,800	2,700	1,800
ARKANSAS - - - - -	200	100	-----
LOUISIANA - - - - -	700	500	300
OKLAHOMA - - - - -	700	500	300
TEXAS - - - - -	3,200	1,700	1,300
MOUNTAIN - - - - -	2,100	1,300	1,100
ARIZONA - - - - -	500	300	200
COLORADO - - - - -	800	500	400
IDAHO - - - - -	100	100	100
MONTANA - - - - -	100	-----	-----
NEVADA - - - - -	100	100	100
NEW MEXICO - - - - -	300	200	200
UTAH - - - - -	200	200	200
WYOMING - - - - -	100	-----	-----
PACIFIC - - - - -	8,700	5,700	3,300
ALASKA - - - - -	100	100	100
CALIFORNIA - - - - -	7,300	4,700	2,600
HAWAII - - - - -	100	100	-----
OREGON - - - - -	300	200	200
WASHINGTON - - - - -	1,000	600	400
OUTLYING AREAS - - - - -	100	100	-----
CANAL ZONE - - - - -	-----	-----	-----
GUAM - - - - -	-----	-----	-----
PUERTO RICO - - - - -	100	100	-----
VIRGIN ISLANDS - - - - -	-----	-----	-----
FOREIGN - - - - -	300	200	100

NOTE - GROUPS MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.

IONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969  
 CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY AGE--CONTINUED

A G E						
45-49	50-54	55-59	60-64	65-69	70 AND OVER	NO REPORT OF AGE
1,700	1,000	800	600	300	200	100
700	300	300	200	100	100	-----
200	200	100	100	-----	-----	-----
100	100	100	100	-----	-----	-----
700	500	400	200	200	100	-----
4,800	2,700	1,800	1,100	700	300	300
200	100	-----	100	100	-----	-----
700	500	300	100	100	100	-----
700	500	300	200	100	100	100
3,200	1,700	1,300	700	400	200	100
2,100	1,300	1,100	800	400	400	200
500	300	200	200	100	100	100
800	500	400	200	100	200	-----
100	100	100	-----	-----	-----	-----
100	-----	-----	100	-----	-----	-----
100	100	100	-----	-----	-----	-----
300	200	200	100	-----	-----	-----
200	200	200	100	-----	-----	-----
100	-----	-----	-----	-----	-----	-----
8,700	5,700	3,300	2,300	900	900	500
100	100	100	-----	-----	-----	-----
7,300	4,700	2,600	1,900	600	800	400
100	100	-----	-----	-----	-----	-----
300	200	200	100	-----	-----	-----
1,000	600	400	300	200	100	100
100	100	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----
100	100	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----
300	200	100	-----	-----	-----	-----

USE OF ROUNDING.

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY PROFESSION

GENERAL CHARACTERISTICS		TOTAL	AGRICUL- TURE & FOOD	AIRCRAFT & SPACE	CERAMIC
TOTAL ENGINEERS REPORTING - - - - -		308,000	4,000	33,000	2,100
STUDENT STATUS					
FULL-TIME - - - - -		2,900	-----	100	-----
PART-TIME - - - - -		11,700	100	2,200	-----
NO REPORT - - - - -		293,400	3,900	30,700	2,000
PROFESSIONAL IDENTIFICATION					
ENGINEER - - - - -		254,700	3,300	29,000	1,500
OTHER - - - - -		44,400	600	3,200	500
NO REPORT - - - - -		8,800	100	800	100
REGISTERED ENGINEERS					
YES - - - - -		131,100	1,600	8,100	800
NO - - - - -		171,400	2,300	24,300	1,300
NO REPORT - - - - -		5,400	100	500	-----
PROFESSIONAL EMPLOYMENT STATUS					
PROFESSIONALLY EMPLOYED - - - - -		293,600	4,000	32,900	2,100
SEEKING EMPLOYMENT - - - - -		2,000	-----	-----	-----
NOT SEEKING EMPLOYMENT - - - - -		10,700	-----	-----	-----
NO REPORT - - - - -		1,600	-----	100	-----
TYPE OF EMPLOYER					
PRIV. INDUSTRY, BUSINESS - - - - -		211,100	2,200	23,900	1,800
SELF-EMPLOYED - - - - -		11,400	200	300	-----
COLLEGE, UNIVERSITY - - - - -		20,200	600	1,200	100
JR. COLLEGE, TECH. INST. - - - - -		900	-----	-----	-----
SEC., ELEM., OTHER SCHOOL - - - - -		300	-----	-----	-----
NONPROFIT ORGANIZATION - - - - -		5,400	-----	1,100	100
FEDERAL GOVERNMENT - - - - -		24,600	900	4,700	-----
USPHS, MILITARY SERVICE - - - - -		4,500	-----	1,300	-----
STATE GOVERNMENT - - - - -		5,900	-----	-----	-----
LOCAL GOVERNMENT - - - - -		4,800	-----	-----	-----
OTHER - - - - -		4,600	-----	300	-----
NO REPORT - - - - -		14,000	-----	100	-----

INTERNATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969  
 CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES

PRODUCTS OR SERVICES								
TOTAL	AGRICUL- TURE & FOOD	AIRCRAFT & SPACE	CERAMICS	CHEMICALS & ALLIED PRODUCTS	COMMU- NICATIONS	COMPUTERS	CONSTRUC- TION & CIVIL ENGR	EDUCA- TIONAL, INFOR- MATION SERVICES
- - - 308,000	4,000	33,000	2,100	19,500	7,700	11,000	45,900	14,600
- - - 2,900	-----	100	-----	100	-----	-----	300	200
- - - 11,700	100	2,200	-----	800	300	700	1,300	500
- - - 293,400	3,900	30,700	2,000	18,600	7,400	10,200	44,200	13,800
- - - 254,700	3,300	29,000	1,500	16,500	6,700	8,600	41,700	11,500
- - - 44,400	600	3,200	500	2,400	900	2,100	2,800	2,600
- - - 8,800	100	800	100	600	200	400	1,400	500
- - - 131,100	1,600	8,100	800	6,000	2,600	2,400	33,400	6,900
- - - 171,400	2,300	24,300	1,300	13,100	5,000	8,400	11,700	7,400
- - - 5,400	100	500	-----	300	100	200	700	300
- - - 293,600	4,000	32,900	2,100	19,400	7,700	11,000	45,600	14,500
- - - 2,000	-----	-----	-----	-----	-----	-----	-----	-----
- - - 10,700	-----	-----	-----	-----	-----	-----	-----	-----
- - - 1,600	-----	100	-----	100	-----	-----	300	100
- - - 211,100	2,200	23,900	1,800	17,900	6,500	9,500	22,100	700
- - - 11,400	200	300	-----	300	100	200	4,200	100
- - - 20,200	600	1,200	100	400	100	300	1,500	12,000
- - - 900	-----	-----	-----	-----	-----	-----	100	800
- - - 300	-----	-----	-----	-----	-----	-----	-----	200
- - - 5,400	-----	1,100	100	200	100	300	400	300
- - - 24,600	900	4,700	-----	400	500	400	7,300	200
- - - 4,900	-----	1,300	-----	-----	100	100	1,300	200
- - - 5,900	-----	-----	-----	-----	-----	-----	4,800	100
- - - 4,800	-----	-----	-----	-----	-----	-----	3,100	-----
- - - 4,600	-----	300	-----	200	200	100	1,000	-----
- - - 14,000	-----	100	-----	100	-----	-----	200	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES

GENERAL CHARACTERISTICS		PRODUCTS OR SERVICES				
		ELFC- TRICAL EQUIP- MENT, SERVICES	ELEC- TRONIC EQUIP- MENT, SERVICES	LAB.,SCI., PHOTO., OPTICAL EQUIPMENT	MACHINERY, MECHANICAL EQUIPMENT	MARI- TIME TRANSPORT
TOTAL ENGINEERS REPORTING - - - - -		19,200	23,000	2,800	28,400	4,800
STUDENT STATUS						
FULL-TIME - - - - -		-----	100	-----	100	-----
PART-TIME - - - - -		600	1,200	100	900	200
NO REPORT - - - - -		18,600	21,800	2,700	27,400	4,600
PROFESSIONAL IDENTIFICATION						
ENGINEER - - - - -		16,400	20,300	2,100	24,200	4,000
OTHER - - - - -		2,200	2,200	600	3,500	600
NO REPORT - - - - -		500	500	100	700	100
REGISTERED ENGINEERS						
YES - - - - -		9,100	5,400	800	13,100	1,400
NO - - - - -		9,700	17,200	1,900	14,900	3,300
NO REPORT - - - - -		400	400	100	400	100
PROFESSIONAL EMPLOYMENT STATUS						
PROFESSIONALLY EMPLOYED - - - - -		19,100	22,900	2,800	28,300	4,700
SEEKING EMPLOYMENT - - - - -		-----	-----	-----	-----	-----
NOT SEEKING EMPLOYMENT - - - - -		-----	-----	-----	-----	-----
NO REPORT - - - - -		100	100	-----	100	-----
TYPE OF EMPLOYER						
PRIV. INDUSTRY, BUSINESS - - - - -		16,500	19,100	2,200	23,800	2,800
SELF-EMPLOYED - - - - -		800	400	100	2,100	100
COLLEGE, UNIVERSITY - - - - -		100	500	100	500	100
JR. COLLEGE, TECH. INST. - - - - -		-----	-----	-----	-----	-----
SEC., ELEM., OTHER SCHOOL - - - - -		-----	-----	-----	-----	-----
NONPROFIT ORGANIZATION - - - - -		200	500	100	300	100
FEDERAL GOVERNMENT - - - - -		1,000	2,000	300	900	1,100
USPHS, MILITARY SERVICE - - - - -		-----	100	-----	100	500
STATE GOVERNMENT - - - - -		100	-----	-----	100	-----
LOCAL GOVERNMENT - - - - -		200	-----	-----	100	-----
OTHER - - - - -		300	200	-----	400	100
NO REPORT - - - - -		100	100	-----	100	-----

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES--CONTINUED

CHARACTERISTICS	PRODUCTS OR SERVICES								
	ELECTRICAL EQUIP- MENT, SERVICES	ELEC- TRONIC EQUIP- MENT, SERVICES	LAB.,SCI., PHOTO., OPTICAL EQUIPMENT	MACHINERY, MECHANICAL EQUIPMENT	MARINE TRANS- PORTATION	MEDICAL, HEALTH SERVICES	METALS, BASIC (EXCEPT MINING)	METAL FABRICATED PRODUCTS	MINING
-----	19,200	23,000	2,800	28,400	4,800	1,300	12,600	6,300	5,900
-----	-----	100	-----	100	-----	-----	200	-----	100
-----	600	1,200	100	900	200	100	500	300	100
-----	18,600	21,800	2,700	27,400	4,500	1,100	11,900	6,000	5,800
-----	16,400	20,300	2,100	24,200	4,000	1,000	6,400	4,700	3,900
-----	2,200	2,200	600	3,500	600	200	6,000	1,300	1,900
-----	500	500	100	700	100	-----	300	200	200
-----	9,100	5,400	800	13,100	1,400	400	3,000	2,400	2,100
-----	9,700	17,200	1,900	14,900	3,300	900	9,400	3,800	3,700
-----	400	400	100	400	100	-----	200	100	100
US	19,100	22,900	2,800	28,300	4,700	1,300	12,600	6,200	5,900
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	100	100	-----	100	-----	-----	100	-----	100
-----	16,500	19,100	2,200	23,800	2,800	500	10,700	5,700	4,600
-----	800	400	100	2,100	100	-----	200	200	400
-----	100	500	100	500	100	200	800	100	200
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	200	500	100	300	100	200	400	100	-----
-----	1,000	2,000	300	900	1,100	100	500	100	600
-----	-----	100	-----	100	500	100	-----	-----	-----
-----	100	-----	-----	100	-----	-----	-----	-----	100
-----	200	-----	-----	100	-----	-----	-----	-----	-----
-----	300	200	-----	400	100	-----	100	-----	-----
-----	100	100	-----	100	-----	-----	100	-----	-----

NATIONAL REGISTER OF SCIENTIFIC AND  
CHARACTERISTICS OF ENGINEERS MEETING CRITERIA

GENERAL CHARACTERISTICS		MOTOR VEHICLE TRANS- PORTATION	ORDNANCE	PETROL
TOTAL ENGINEERS REPORTING - - - - -		2,500	5,200	15,5
STUDENT STATUS				
FULL-TIME - - - - -		100	300	3
PART-TIME - - - - -		2,400	4,900	15,1
NO REPORT - - - - -				
PROFESSIONAL IDENTIFICATION				
ENGINEER - - - - -		2,000	4,400	12,8
OTHER - - - - -		400	600	2,4
NO REPORT - - - - -		100	200	3
REGISTERED ENGINEERS				
YES - - - - -		900	1,500	7,0
NO - - - - -		1,600	3,600	8,2
NO REPORT - - - - -				3
PROFESSIONAL EMPLOYMENT STATUS				
PROFESSIONALLY EMPLOYED - - - - -		2,500	5,100	15,4
SEEKING EMPLOYMENT - - - - -				
NOT SEEKING EMPLOYMENT - - - - -				
NO REPORT - - - - -				1
TYPE OF EMPLOYER				
PRIV. INDUSTRY, BUSINESS - - - - -		2,000	2,800	14,1
SELF-EMPLOYED - - - - -				7
COLLEGE, UNIVERSITY - - - - -		100	100	1
JR. COLLEGE, TECH. INST. - - - - -				
SFC., ELEM., OTHER SCHOOL - - - - -			200	
NONPROFIT ORGANIZATION - - - - -				
FEDERAL GOVERNMENT - - - - -		100	1,700	
USPHS, MILITARY SERVICE - - - - -			300	
STATE GOVERNMENT - - - - -		100		
LOCAL GOVERNMENT - - - - -				
OTHER - - - - -			100	
NO REPORT - - - - -				

# NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES--CONTINUED

CHARACTERISTICS	PRODUCTS OR SERVICES						
	MOTOR VEHICLE TRANS- PORTATION	ORDNANCE	PETROLEUM	RAILWAY, RAPID TRANSIT	UTILITIES	OTHER PRODUCTS, SERVICES	NO REPORT OF PRODUCTS OR SERVICES
PORTING - - - - -	2,500	5,200	15,500	1,500	14,700	11,300	15,200
- - - - -	-----	-----	100	-----	-----	100	1,300
- - - - -	100	300	300	100	300	500	200
- - - - -	2,400	4,900	15,100	1,500	14,400	10,800	13,700
IFICATION							
- - - - -	2,000	4,400	12,800	1,300	12,800	7,700	11,800
- - - - -	400	600	2,400	200	1,500	3,300	2,500
- - - - -	100	200	300	-----	400	300	900
S							
- - - - -	900	1,500	7,000	700	9,500	4,200	7,700
- - - - -	1,600	3,600	8,200	800	5,000	6,800	7,000
- - - - -	-----	-----	300	-----	200	300	400
MENT STATUS							
EMPLOYED - - - - -	2,500	5,100	15,400	1,500	14,700	11,300	7,200
MENT - - - - -	-----	-----	-----	-----	-----	-----	2,000
PLOYMENT - - - - -	-----	-----	-----	-----	-----	-----	10,700
- - - - -	-----	-----	100	-----	100	-----	200
BUSINESS - - - - -	2,000	2,800	14,100	1,300	11,400	8,000	1,200
- - - - -	-----	-----	700	-----	300	500	100
SITY - - - - -	100	100	100	-----	-----	400	400
H. INST.	-----	-----	-----	-----	-----	-----	-----
ER SCHOOL	-----	-----	-----	-----	-----	-----	-----
NIZATION - - - - -	-----	200	100	-----	100	700	100
MENT - - - - -	100	1,700	200	-----	600	800	200
SERVICE - - - - -	-----	300	-----	-----	-----	200	200
NT - - - - -	100	-----	100	-----	200	300	-----
NT - - - - -	-----	-----	100	100	1,000	100	-----
- - - - -	-----	100	100	-----	1,100	300	-----
- - - - -	-----	-----	-----	-----	100	-----	12,900



**NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL  
CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY PROFESSION**

GENERAL CHARACTERISTICS										TOTAL	AGRICUL- TURE & FOOD	AIRCRAFT & SPACE	CER.
<b>AREAS OF TECHNOLOGY</b>													
BIOMEDICAL	-	-	-	-	-	-	-	-	-	1,600	200	200	---
BEHAVIORAL AND SOCIAL	-	-	-	-	-	-	-	-	-	4,100	100	100	---
CHEMICAL AND MATERIALS	-	-	-	-	-	-	-	-	-	11,700	100	1,100	
METALLURGICAL	-	-	-	-	-	-	-	-	-	12,100	---	600	
EARTH, ATMOSPHERE, MARINE	-	-	-	-	-	-	-	-	-	9,900	100	200	
ENVIRONMENTAL, STRUCTURAL	-	-	-	-	-	-	-	-	-	33,700	800	2,100	
ELECTROMAGNETIC	-	-	-	-	-	-	-	-	-	42,800	100	2,300	
DYNAMICS AND MECHANICS	-	-	-	-	-	-	-	-	-	40,100	400	9,900	
HEAT, LIGHT, APPL. PHYSICS	-	-	-	-	-	-	-	-	-	8,500	---	1,600	
NUCLEAR	-	-	-	-	-	-	-	-	-	2,600	---	100	---
ENGR. PROCESS-APPLICATION	-	-	-	-	-	-	-	-	-	32,100	700	2,000	
AUTOMATION AND CONTROL	-	-	-	-	-	-	-	-	-	12,400	100	2,300	
WORK MGMT, EVALUATION	-	-	-	-	-	-	-	-	-	56,500	1,100	7,600	
INFORMATION, MATHEMATICS	-	-	-	-	-	-	-	-	-	11,500	---	1,400	---
OTHER	-	-	-	-	-	-	-	-	-	9,700	300	1,300	
NO REPORT	-	-	-	-	-	-	-	-	-	18,700	100	400	---
<b>FUNCTION</b>													
DESIGN	-	-	-	-	-	-	-	-	-	53,600	400	6,200	
DEVELOPMENT	-	-	-	-	-	-	-	-	-	32,300	300	6,600	
RESEARCH	-	-	-	-	-	-	-	-	-	22,000	800	4,600	
PRODUCTION	-	-	-	-	-	-	-	-	-	56,600	800	2,500	
CONTROL	-	-	-	-	-	-	-	-	-	104,700	1,400	11,000	
TEACHING	-	-	-	-	-	-	-	-	-	14,700	200	600	
OTHER	-	-	-	-	-	-	-	-	-	6,200	100	1,100	---
NO REPORT	-	-	-	-	-	-	-	-	-	17,900	100	400	---
<b>SUPERVISORY LEVEL</b>													
NO REG. SUPV. GIVEN	-	-	-	-	-	-	-	-	-	52,200	700	7,100	
INDIRECT OR STAFF	-	-	-	-	-	-	-	-	-	50,400	700	7,100	
TEAM OR UNIT	-	-	-	-	-	-	-	-	-	33,900	400	5,400	
PROJECT OR SECTION	-	-	-	-	-	-	-	-	-	61,700	1,000	6,600	
MAJOR DEPT., DIV., PROGRAM	-	-	-	-	-	-	-	-	-	56,900	900	4,700	
GEN. MGMT. OF ORGANIZATION	-	-	-	-	-	-	-	-	-	28,800	300	1,200	
NO REPORT	-	-	-	-	-	-	-	-	-	24,000	200	900	

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES--CONTINUED

CHARACTERISTICS	TOTAL	PRODUCTS OR SERVICES							
		AGRICUL- TURE & FOOD	AIRCRAFT & SPACE	CERAMICS	CHEMICALS & ALLIED PRODUCTS	COMMU- NICATIONS	COMPUTERS	CONSTRUC- TION & CIVIL ENGR	EDUCA- TIONAL, INFOR- MATION SERVICES
- - - - -	1,600	200	200	-----	100	-----	-----	100	100
- - - - -	4,100	100	100	-----	400	100	-----	200	1,600
S - - - - -	11,700	100	1,100	400	4,000	100	100	500	500
- - - - -	12,100	-----	600	100	200	-----	100	100	500
NE - - - - -	9,900	100	200	100	100	-----	100	1,400	400
ARAL - - - - -	33,700	800	2,100	300	400	-----	100	20,400	1,600
- - - - -	42,800	100	2,300	100	300	5,200	1,700	900	1,300
S - - - - -	40,100	400	9,900	200	1,400	100	300	3,000	3,200
ICS - - - - -	8,500	-----	1,600	100	600	100	100	200	800
- - - - -	2,600	-----	100	-----	300	-----	-----	100	200
ION - - - - -	32,100	700	2,000	200	3,900	300	300	10,000	1,000
L - - - - -	12,400	100	2,300	100	800	100	500	500	300
- - - - -	56,500	1,100	7,600	500	5,600	1,300	2,300	5,300	1,200
CS - - - - -	11,500	-----	1,400	-----	300	200	5,100	700	1,000
- - - - -	9,700	300	1,300	100	1,000	200	200	1,400	500
- - - - -	18,700	100	400	-----	300	100	200	900	300
- - - - -	53,600	400	6,200	100	2,800	1,300	2,100	13,400	200
- - - - -	32,300	300	6,600	300	3,200	1,000	1,700	1,300	100
- - - - -	22,000	800	4,600	300	1,600	400	600	1,500	800
- - - - -	56,600	800	2,500	600	4,700	1,100	1,400	8,500	100
- - - - -	104,700	1,400	11,000	600	6,300	3,500	4,600	19,200	2,200
- - - - -	14,700	200	600	100	200	100	200	800	10,800
- - - - -	6,200	100	1,100	-----	500	200	300	600	200
- - - - -	17,900	100	400	-----	200	200	100	600	200
- - - - -	52,200	700	7,100	300	3,400	1,300	2,500	6,100	4,000
- - - - -	50,400	700	7,100	200	3,500	1,500	2,100	6,400	2,800
- - - - -	33,900	400	5,400	200	2,600	1,300	1,500	4,200	1,600
- - - - -	61,700	1,000	6,600	400	3,900	1,600	2,300	11,200	2,100
RAM - - - - -	56,900	900	4,700	700	4,200	1,300	1,700	8,700	2,800
ION - - - - -	28,800	300	1,200	100	1,200	500	600	7,500	700
- - - - -	24,000	200	900	100	600	200	400	1,800	600

NATIONAL REGISTER OF SCIENTISTS  
CHARACTERISTICS OF ENGINEERS MEETING

GENERAL CHARACTERISTICS

		ELEC- TRICAL EQUIP- MENT, SERVICES	ELEC- TRONIC EQUIP- MENT, SERVICES
AREAS OF TECHNOLOGY			
BIOMEDICAL - - - - -		----	100
BEHAVIORAL AND SOCIAL - - - - -		----	100
CHEMICAL AND MATERIALS - - - - -		400	200
METALLURGICAL - - - - -		300	100
EARTH, ATMOSPHERE, MARINE - - - - -		----	200
ENVIRONMENTAL, STRUCTURAL - - - - -		200	100
ELECTROMAGNETIC - - - - -		10,500	10,000
DYNAMICS AND MECHANICS - - - - -		1,100	800
HEAT, LIGHT, APPL. PHYSICS - - - - -		400	1,300
NUCLEAR - - - - -		300	100
ENGR. PROCESS-APPLICATION - - - - -		600	1,300
AUTOMATION AND CONTROL - - - - -		1,700	2,400
WORK MGMT, EVALUATION - - - - -		2,800	4,900
INFORMATION, MATHEMATICS - - - - -		200	700
OTHER - - - - -		300	400
NO REPORT - - - - -		300	300
FUNCTION			
DESIGN - - - - -		4,600	4,900
DEVELOPMENT - - - - -		2,100	4,700
RESEARCH - - - - -		700	1,700
PRODUCTION - - - - -		5,200	3,400
CONTROL - - - - -		5,900	7,400
TEACHING - - - - -		100	200
OTHER - - - - -		400	500
NO REPORT - - - - -		300	200
SUPERVISORY LEVEL			
NO REG. SUPV. GIVEN - - - - -		3,700	3,600
INDIRECT OR STAFF - - - - -		3,100	3,900
TEAM OR UNIT - - - - -		2,200	3,400
PROJECT OR SECTION - - - - -		4,300	5,600
MAJOR DEPT., DIV., PROGRAM - - - - -		3,300	4,300
GEN. MGMT OF ORGANIZATION - - - - -		1,900	1,600
NO REPORT - - - - -		600	600

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES--CONTINUED

PRODUCTS OR SERVICES

STICS

	ELEC- TRICAL EQUIP- MENT, SERVICES	ELEC- TRONIC EQUIP- MENT, SERVICES	LAB.,SCI., PHOTO., OPTICAL EQUIPMENT	MACHINERY, MECHANICAL EQUIPMENT	MARINE TRANS- PORTATION	MEDICAL, HEALTH SERVICES	METALS, BASIC (EXCEPT MINING)	METAL FABRICATED PRODUCTS	MINING
-	-----	100	100	100	-----	400	-----	-----	-----
-	-----	100	-----	100	-----	-----	100	-----	100
-	400	200	100	1,100	-----	-----	1,100	500	100
-	300	100	-----	500	100	-----	7,300	900	800
-	-----	200	100	200	900	-----	100	-----	3,600
L	200	100	100	2,700	600	100	100	400	200
-	10,500	10,000	200	700	300	-----	200	100	100
-	1,100	800	300	11,200	800	100	500	900	100
S	400	1,300	400	1,500	100	-----	100	300	-----
-	300	100	-----	600	100	-----	-----	-----	-----
N	600	1,300	100	2,300	500	-----	600	700	300
-	1,700	2,400	900	800	100	100	200	100	-----
-	2,800	4,900	400	5,300	900	300	2,000	2,000	500
-	200	700	100	400	100	-----	100	100	-----
-	300	400	100	700	200	-----	100	100	100
-	300	300	-----	500	100	-----	100	100	100
-	4,600	4,900	400	7,200	1,400	200	600	900	300
-	2,100	4,700	500	2,700	500	200	1,500	700	300
-	700	1,700	400	1,100	300	200	2,800	400	500
-	5,200	3,400	600	7,800	600	100	3,700	1,600	2,200
-	5,900	7,400	800	9,500	1,800	500	3,400	2,300	2,400
-	100	200	-----	300	100	100	300	-----	100
-	400	500	-----	400	100	-----	100	100	100
-	300	200	-----	400	-----	-----	200	100	100
-	3,700	3,600	400	5,200	900	200	2,400	900	700
-	3,100	3,900	400	4,200	600	200	2,400	1,000	900
-	2,200	3,400	300	2,500	500	100	1,300	400	500
-	4,300	5,600	500	5,600	1,100	200	2,300	1,000	1,100
M	3,300	4,300	600	5,600	1,000	300	2,900	1,500	1,600
N	1,900	1,600	500	4,400	500	100	1,000	1,100	900
-	600	600	100	1,000	100	-----	400	200	200

# NATIONAL REGISTER OF SCIENTIFIC CHARACTERISTICS OF ENGINEERS MEETING CRIT

## GENERAL CHARACTERISTICS

		MOTOR VEHICLE TRANS- PORTATION	ORDNANCE PET	
AREAS OF TECHNOLOGY				
BIOMEDICAL	- - - - -	-----	-----	
BEHAVIORAL AND SOCIAL	- - - - -	-----	-----	
CHEMICAL AND MATERIALS	- - - - -	100	100	
METALLURGICAL	- - - - -	200	100	
EARTH, ATMOSPHERE, MARINE	- - - - -	-----	100	
ENVIRONMENTAL, STRUCTURAL	- - - - -	300	100	
ELECTROMAGNETIC	- - - - -	100	500	
DYNAMICS AND MECHANICS	- - - - -	500	1,100	
HEAT, LIGHT, APPL. PHYSICS	- - - - -	-----	100	
NUCLEAR	- - - - -	-----	-----	
ENGR. PROCESS-APPLICATION	- - - - -	200	500	
AUTOMATION AND CONTROL	- - - - -	100	300	
WORK MGMT, EVALUATION	- - - - -	900	2,000	
INFORMATION, MATHEMATICS	- - - - -	100	100	
OTHER	- - - - -	-----	200	
NO REPORT	- - - - -	100	-----	
FUNCTION				
DESIGN	- - - - -	300	700	
DEVELOPMENT	- - - - -	500	1,200	
RESEARCH	- - - - -	200	400	
PRODUCTION	- - - - -	300	700	
CONTROL	- - - - -	900	1,900	
TEACHING	- - - - -	100	-----	
OTHER	- - - - -	100	200	
NO REPORT	- - - - -	-----	-----	
SUPERVISORY LEVEL				
NO REG. SUPV. GIVEN	- - - - -	400	1,100	
INDIRECT OR STAFF	- - - - -	500	1,000	
TEAM OR UNIT	- - - - -	300	700	
PROJECT OR SECTION	- - - - -	500	1,200	
MAJOR DEPT., DIV., PROGRAM	- - - - -	500	900	
GEN. MGMT OF ORGANIZATION	- - - - -	100	200	
NO REPORT	- - - - -	100	100	

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES--CONTINUED

PRODUCTS OR SERVICES									
CHARACTERISTICS									
	MOTOR VEHICLE TRANS- PORTATION	ORDNANCE	PETROLEUM	RAILWAY, RAPID TRANSIT	UTILITIES	OTHER PRODUCTS, SERVICES	NO REPORT OF PRODUCTS OR SERVICES		
						100			
			700		200	300			
S	100	100	500		300	500			
	200	100	100			200	100		
NE		100	1,800		100	200	100		
RAL	300	100	400	400	1,500	700	100		
	100	500	300	100	7,100	600	100		
S	500	1,100	1,300	200	1,800	1,000	100		
ICS		100	200		100	300	100		
					300	200			
ION	200	500	5,000	100	700	900	100		
	100	300	400	100	400	400	100		
	900	2,000	3,200	400	1,400	4,500	200		
ES	100	100	400	100	200	200			
		200	1,000		400	1,100			
	100		300		200	300	14,200		
	300	700	1,300	300	2,700	800	200		
	500	1,200	1,000	100	700	1,000	100		
	200	400	1,000		300	900	200		
	300	700	4,500	300	4,100	1,700	100		
	900	1,900	6,900	700	6,300	5,900	400		
	100		100		100	200	100		
	100	200	400		400	600			
			300		200	200	14,100		
	400	1,100	3,000	200	1,900	1,800	300		
	500	1,000	3,200	200	2,400	1,900	100		
	300	700	1,600	100	1,800	1,000	100		
	500	1,200	3,000	400	3,600	2,000	200		
RAM	500	900	2,600	300	3,600	2,700	200		
ON	100	200	1,400	100	1,100	1,600	100		
	100	100	600	100	400	400	14,100		

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL  
CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY PRODUCT

GENERAL CHARACTERISTICS										TOTAL	AGRICUL- TURE & FOOD	AIRCRAFT & SPACE	CERAMI
ALL GEOGRAPHIC LOCATIONS - - - - -										308,000	4,000	33,000	2,100
NEW ENGLAND - - - - -										21,800	100	2,600	100
CONNECTICUT - - - - -										6,600	-----	1,400	-----
MAINE - - - - -										700	-----	-----	-----
MASSACHUSETTS - - - - -										12,300	-----	1,100	100
NEW HAMPSHIRE - - - - -										900	-----	-----	-----
RHODE ISLAND - - - - -										1,000	-----	-----	-----
VERMONT - - - - -										500	-----	-----	-----
MIDDLE ATLANTIC - - - - -										66,400	500	4,400	700
NEW JERSEY - - - - -										14,500	100	700	-----
NEW YORK - - - - -										29,200	300	2,100	300
PENNSYLVANIA - - - - -										22,700	100	1,500	300
EAST NORTH CENTRAL - - - - -										52,200	700	3,300	600
ILLINOIS - - - - -										14,800	300	200	100
INDIANA - - - - -										5,800	100	300	-----
MICHIGAN - - - - -										9,200	100	200	100
OHIO - - - - -										17,500	100	2,400	300
WISCONSIN - - - - -										5,000	100	100	-----
WEST NORTH CENTRAL - - - - -										18,500	500	1,600	100
IOWA - - - - -										2,800	100	100	-----
KANSAS - - - - -										2,000	100	400	-----
MINNESOTA - - - - -										4,600	200	300	-----
MISSOURI - - - - -										7,000	100	900	-----
NEBRASKA - - - - -										1,500	-----	-----	-----
NORTH DAKOTA - - - - -										300	-----	-----	-----
SOUTH DAKOTA - - - - -										400	-----	-----	-----
SOUTH ATLANTIC - - - - -										39,300	700	4,500	200
DELAWARE - - - - -										2,100	-----	-----	-----
DISTRICT OF COLUMBIA - - - - -										5,900	-----	900	-----
FLORIDA - - - - -										6,700	100	1,300	-----
GEORGIA - - - - -										3,100	100	600	-----
MARYLAND - - - - -										7,600	100	800	-----
NORTH CAROLINA - - - - -										3,700	200	100	-----
SOUTH CAROLINA - - - - -										2,000	100	-----	-----
VIRGINIA - - - - -										6,300	100	800	-----
WEST VIRGINIA - - - - -										2,000	-----	-----	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES--CONTINUED

CHARACTERISTICS	TOTAL	PRODUCTS OR SERVICES							EDUCA- TIONAL, INFOR- MATION SERVICES
		AGRICUL- TURE & FOOD	AIRCRAFT & SPACE	CERAMICS	CHEMICALS & ALLIED PRODUCTS	COMMU- NICATIONS	COMPUTERS	CONSTRUC- TION & CIVIL ENGR	
S - - - - -	308,000	4,000	33,000	2,100	19,500	7,700	11,000	45,900	14,600
- - - - -	21,800	100	2,600	100	900	500	1,000	2,400	1,200
- - - - -	6,600	-----	1,400	-----	300	100	200	500	200
- - - - -	700	-----	-----	-----	-----	-----	-----	200	100
- - - - -	12,300	-----	1,100	100	500	300	800	1,400	600
- - - - -	900	-----	-----	-----	-----	-----	-----	100	100
- - - - -	1,000	-----	-----	-----	-----	-----	-----	100	100
- - - - -	500	-----	-----	-----	-----	-----	100	100	100
- - - - -	66,400	500	4,400	700	5,000	2,400	3,300	8,100	2,700
- - - - -	14,500	100	700	-----	2,000	1,100	800	1,300	500
- - - - -	29,200	300	2,100	300	1,900	900	1,700	4,100	1,400
- - - - -	22,700	100	1,500	300	1,100	400	800	2,700	800
- - - - -	52,200	700	3,300	600	3,200	1,300	1,000	6,600	2,800
- - - - -	14,800	300	200	100	800	600	300	2,400	600
- - - - -	5,800	100	300	-----	300	100	-----	600	600
- - - - -	9,200	100	200	100	800	100	200	1,200	500
- - - - -	17,500	100	2,400	300	1,100	300	400	1,600	800
- - - - -	5,000	100	100	-----	100	100	100	800	400
- - - - -	18,500	500	1,600	100	1,100	400	900	3,800	1,300
- - - - -	2,800	100	100	-----	100	200	100	400	300
- - - - -	2,000	100	400	-----	100	-----	-----	500	200
- - - - -	4,600	200	300	-----	200	100	600	600	200
- - - - -	7,000	100	900	-----	800	100	100	1,500	400
- - - - -	1,500	-----	-----	-----	-----	-----	-----	600	100
- - - - -	300	-----	-----	-----	-----	-----	-----	100	-----
- - - - -	400	-----	-----	-----	-----	-----	-----	100	-----
- - - - -	39,300	700	4,500	200	3,500	1,300	1,000	6,500	1,800
- - - - -	2,100	-----	-----	-----	1,100	-----	-----	200	100
UMH IA - - - - -	5,900	-----	900	-----	100	300	100	1,300	100
- - - - -	6,700	100	1,300	-----	300	200	200	900	200
- - - - -	3,100	100	600	-----	100	100	-----	600	200
- - - - -	7,600	100	800	-----	300	200	300	1,100	200
- - - - -	3,700	200	100	-----	200	200	100	600	300
- - - - -	2,000	100	-----	-----	300	-----	-----	400	100
- - - - -	6,300	100	800	-----	400	200	100	1,200	400
- - - - -	2,000	-----	-----	-----	800	-----	-----	300	100



NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES

GENERAL CHARACTERISTICS

	ELEC- TRICAL EQUIP- MENT, SERVICES	ELEC- TRONIC EQUIP- MENT, SERVICES	LAB., SCI., PHOTO., OPTICAL EQUIPMENT	MACHINERY, MECHANICAL EQUIPMENT	MA- TRIALS
ALL GEOGRAPHIC LOCATIONS - - - - -	19,200	23,000	2,800	28,400	4
NEW ENGLAND - - - - -	1,600	2,800	500	2,100	
CONNECTICUT - - - - -	500	500	100	700	
MAINE - - - - -	-----	-----	-----	-----	
MASSACHUSETTS - - - - -	900	2,000	400	1,100	
NEW HAMPSHIRE - - - - -	100	200	-----	-----	
RHODE ISLAND - - - - -	100	100	-----	100	
VERMONT - - - - -	-----	-----	-----	-----	
MIDDLE ATLANTIC - - - - -	5,500	6,100	700	6,800	1
NEW JERSEY - - - - -	1,000	1,900	100	1,300	
NEW YORK - - - - -	2,200	2,800	400	2,900	
PENNSYLVANIA - - - - -	2,300	1,400	200	2,600	
EAST NORTH CENTRAL - - - - -	4,900	2,800	400	7,600	
ILLINOIS - - - - -	1,300	900	100	2,600	
INDIANA - - - - -	600	500	-----	500	
MICHIGAN - - - - -	600	300	100	1,100	
OHIO - - - - -	1,700	900	200	2,400	
WISCONSIN - - - - -	700	200	-----	1,000	
WEST NORTH CENTRAL - - - - -	1,100	1,000	100	1,900	
IOWA - - - - -	200	300	-----	500	
KANSAS - - - - -	-----	-----	-----	200	
MINNESOTA - - - - -	400	300	100	500	
MISSOURI - - - - -	400	400	-----	500	
NEBRASKA - - - - -	100	-----	-----	200	
NORTH DAKOTA - - - - -	-----	-----	-----	-----	
SOUTH DAKOTA - - - - -	-----	-----	-----	-----	
SOUTH ATLANTIC - - - - -	1,700	2,900	200	3,100	1
DELAWARE - - - - -	100	-----	-----	200	
DISTRICT OF COLUMBIA - - - - -	200	500	-----	200	
FLORIDA - - - - -	200	500	-----	500	
GEORGIA - - - - -	200	100	-----	300	
MARYLAND - - - - -	200	1,100	-----	600	
NORTH CAROLINA - - - - -	300	200	-----	500	
SOUTH CAROLINA - - - - -	100	-----	-----	300	
VIRGINIA - - - - -	400	400	-----	400	
WEST VIRGINIA - - - - -	-----	-----	-----	100	

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## CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES--CONTINUED

## PRODUCTS OR SERVICES

TICS

	ELEC- TRICAL EQUIP- MENT, SERVICES	ELEC- TRONIC EQUIP- MENT, SERVICES	LAB.,SCI., PHOTO., OPTICAL EQUIPMENT	MACHINERY, MECHANICAL EQUIPMENT	MARINE TRANS- PORTATION	MEDICAL, HEALTH SERVICES	METALS, BASIC (EXCEPT MINING)	METAL FABRICATED PRODUCTS	MINING
- - - - -	19,200	23,000	2,800	28,400	4,800	1,300	12,600	6,300	5,900
- - - - -	1,600	2,800	500	2,100	700	100	700	700	100
- - - - -	500	500	100	700	300	-----	300	400	-----
- - - - -	-----	-----	-----	-----	100	-----	-----	-----	-----
- - - - -	900	2,000	400	1,100	200	-----	400	200	-----
- - - - -	100	200	-----	-----	100	-----	-----	-----	-----
- - - - -	100	100	-----	100	-----	-----	-----	-----	-----
- - - - -	-----	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	5,500	6,100	700	6,800	1,100	300	4,200	1,500	900
- - - - -	1,000	1,900	100	1,300	100	100	500	300	100
- - - - -	2,200	2,800	400	2,900	700	100	1,200	400	400
- - - - -	2,300	1,400	200	2,600	300	100	2,600	800	500
- - - - -	4,900	2,800	400	7,600	200	200	3,400	1,800	600
- - - - -	1,300	900	100	2,600	-----	100	800	400	200
- - - - -	600	500	-----	500	-----	-----	500	200	100
- - - - -	600	300	100	1,100	-----	-----	500	300	200
- - - - -	1,700	900	200	2,400	100	-----	1,500	700	200
- - - - -	700	200	-----	1,000	-----	100	100	200	100
- - - - -	1,100	1,000	100	1,900	-----	100	400	300	500
- - - - -	200	300	-----	500	-----	-----	100	-----	-----
- - - - -	-----	-----	-----	200	-----	-----	-----	-----	-----
- - - - -	400	300	100	500	-----	100	100	100	300
- - - - -	400	400	-----	500	-----	-----	200	100	100
- - - - -	100	-----	-----	200	-----	-----	-----	-----	-----
- - - - -	-----	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	1,700	2,900	200	3,100	1,600	200	900	500	600
- - - - -	100	-----	-----	200	-----	-----	-----	-----	-----
- - - - -	200	500	-----	200	500	-----	100	-----	100
- - - - -	200	500	-----	500	100	-----	-----	100	100
- - - - -	200	100	-----	300	-----	-----	-----	100	-----
- - - - -	200	1,100	-----	600	500	100	200	100	-----
- - - - -	300	200	-----	500	-----	-----	100	100	-----
- - - - -	100	-----	-----	300	-----	-----	100	100	-----
- - - - -	400	400	-----	400	400	-----	200	100	100
- - - - -	-----	-----	-----	100	-----	-----	200	-----	200

NATIONAL REGISTER OF SCIENCE  
CHARACTERISTICS OF ENGINEERS MEETINGS

GENERAL CHARACTERISTICS

		MOTOR VEHICLE TRANS- PORTATION	ORDNANCE
ALL GEOGRAPHIC LOCATIONS	- - - - -	2,500	5,200
NEW ENGLAND	- - - - -	100	400
CONNECTICUT	- - - - -	-----	-----
MAINE	- - - - -	-----	-----
MASSACHUSETTS	- - - - -	-----	300
NEW HAMPSHIRE	- - - - -	-----	-----
RHODE ISLAND	- - - - -	-----	100
VERMONT	- - - - -	-----	-----
MIDDLE ATLANTIC	- - - - -	200	600
NEW JERSEY	- - - - -	100	300
NEW YORK	- - - - -	100	100
PENNSYLVANIA	- - - - -	100	100
EAST NORTH CENTRAL	- - - - -	1,700	600
ILLINOIS	- - - - -	100	200
INDIANA	- - - - -	200	100
MICHIGAN	- - - - -	1,100	200
OHIO	- - - - -	200	100
WISCONSIN	- - - - -	100	-----
WEST NORTH CENTRAL	- - - - -	-----	-----
IOWA	- - - - -	-----	-----
KANSAS	- - - - -	-----	-----
MINNESOTA	- - - - -	-----	-----
MISSOURI	- - - - -	-----	-----
NEBRASKA	- - - - -	-----	-----
NORTH DAKOTA	- - - - -	-----	-----
SOUTH DAKOTA	- - - - -	-----	-----
SOUTH ATLANTIC	- - - - -	200	1,000
DELAWARE	- - - - -	-----	-----
DISTRICT OF COLUMBIA	- - - - -	100	-----
FLORIDA	- - - - -	-----	-----
GEORGIA	- - - - -	-----	-----
MARYLAND	- - - - -	-----	-----
NORTH CAROLINA	- - - - -	-----	-----
SOUTH CAROLINA	- - - - -	-----	-----
VIRGINIA	- - - - -	-----	-----
WEST VIRGINIA	- - - - -	-----	-----

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CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES--CONTINUED

PRODUCTS OR SERVICES

AL CHARACTERISTICS

	MOTOR VEHICLE TRANS- PORTATION	ORDNANCE	PETROLEUM	RAILWAY, RAPID TRANSIT	UTILITIES	OTHER PRODUCTS, SERVICES	NO REPORT OF PRODUCTS OR SERVICES
LOCATIONS - - - - -	2,500	5,200	15,500	1,500	14,700	11,300	15,200
C - - - - -	100	400	-----	-----	1,100	900	1,300
CUT - - - - -	-----	-----	-----	-----	300	300	300
- - - - -	-----	-----	-----	-----	-----	100	100
USETTS - - - - -	-----	300	-----	-----	600	500	700
SHIRE - - - - -	-----	-----	-----	-----	100	-----	100
LAND - - - - -	-----	100	-----	-----	100	-----	100
- - - - -	-----	-----	-----	-----	-----	-----	-----
ANTIC - - - - -	200	600	1,700	600	3,100	2,700	3,300
KEY - - - - -	100	300	400	-----	600	400	700
- - - - -	100	100	700	200	1,300	1,500	1,500
ANIA - - - - -	100	100	600	300	1,300	800	1,100
CENTRAL - - - - -	1,700	600	1,100	300	2,900	2,200	2,100
- - - - -	100	200	500	200	700	700	700
- - - - -	200	100	200	-----	300	200	200
- - - - -	1,100	200	100	-----	700	200	400
- - - - -	200	100	200	-----	800	800	600
- - - - -	100	-----	-----	-----	300	300	200
CENTRAL - - - - -	-----	200	600	200	1,200	500	800
- - - - -	-----	-----	-----	-----	200	100	100
- - - - -	-----	-----	200	-----	100	-----	100
A - - - - -	-----	100	-----	-----	200	200	200
- - - - -	-----	100	100	100	500	200	400
- - - - -	-----	-----	100	-----	200	-----	-----
KOTA - - - - -	-----	-----	-----	-----	-----	-----	-----
KOTA - - - - -	-----	-----	-----	-----	-----	-----	-----
ATIC - - - - -	200	1,100	300	100	1,800	2,000	2,500
- - - - -	-----	-----	-----	-----	100	100	-----
OF COLUMBIA - - - - -	100	200	100	-----	200	400	200
- - - - -	-----	200	100	-----	600	200	900
- - - - -	-----	-----	-----	-----	100	300	200
- - - - -	-----	500	-----	-----	300	300	400
ROLINA - - - - -	-----	-----	-----	-----	200	300	200
ROLINA - - - - -	-----	-----	-----	-----	100	200	100
- - - - -	-----	100	-----	-----	100	300	400
GINIA - - - - -	-----	-----	100	-----	100	-----	-----

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CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY PR

GENERAL CHARACTERISTICS										TOTAL	AGRICUL- TURE & FOOD	AIRCRAFT & SPACE	CE
GEOGRAPHIC LOCATION, CONTINUED													
EAST SOUTH CENTRAL	-	-	-	-	-	-	-	-	-	11,900	200	1,300	
ALABAMA	-	-	-	-	-	-	-	-	-	4,000	-----	900	
KENTUCKY	-	-	-	-	-	-	-	-	-	1,900	100	-----	
MISSISSIPPI	-	-	-	-	-	-	-	-	-	1,200	100	100	
TENNESSEE	-	-	-	-	-	-	-	-	-	4,800	100	300	
WEST SOUTH CENTRAL	-	-	-	-	-	-	-	-	-	29,500	300	2,200	
ARKANSAS	-	-	-	-	-	-	-	-	-	900	-----	-----	
LOUISIANA	-	-	-	-	-	-	-	-	-	5,100	100	200	
OKLAHOMA	-	-	-	-	-	-	-	-	-	4,300	-----	200	
TEXAS	-	-	-	-	-	-	-	-	-	19,200	200	1,800	
MOUNTAIN	-	-	-	-	-	-	-	-	-	14,800	300	1,200	
ARIZONA	-	-	-	-	-	-	-	-	-	3,100	100	200	
COLORADO	-	-	-	-	-	-	-	-	-	4,800	100	500	
IDAHO	-	-	-	-	-	-	-	-	-	900	100	-----	
MONTANA	-	-	-	-	-	-	-	-	-	800	-----	-----	
NEVADA	-	-	-	-	-	-	-	-	-	900	-----	-----	
NEW MEXICO	-	-	-	-	-	-	-	-	-	2,000	-----	200	
UTAH	-	-	-	-	-	-	-	-	-	1,600	-----	200	
WYOMING	-	-	-	-	-	-	-	-	-	500	-----	-----	
PACIFIC	-	-	-	-	-	-	-	-	-	50,700	600	11,800	
ALASKA	-	-	-	-	-	-	-	-	-	600	-----	-----	
CALIFORNIA	-	-	-	-	-	-	-	-	-	41,400	400	10,100	
HAWAII	-	-	-	-	-	-	-	-	-	1,000	100	-----	
OREGON	-	-	-	-	-	-	-	-	-	1,700	-----	-----	
WASHINGTON	-	-	-	-	-	-	-	-	-	6,000	100	1,600	
OUTLYING AREAS	-	-	-	-	-	-	-	-	-	500	-----	-----	
CANAL ZONE	-	-	-	-	-	-	-	-	-	-----	-----	-----	
GUAM	-	-	-	-	-	-	-	-	-	-----	-----	-----	
PUERTO RICO	-	-	-	-	-	-	-	-	-	500	-----	-----	
VIRGIN ISLANDS	-	-	-	-	-	-	-	-	-	-----	-----	-----	
FOREIGN	-	-	-	-	-	-	-	-	-	2,200	-----	200	

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## CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES--CONTINUED

CHARACTERISTICS	TOTAL	PRODUCTS OR SERVICES							
		AGRICUL- TURE & FOOD	AIRCRAFT & SPACE	CERAMICS	CHEMICALS & ALLIED PRODUCTS	COMMU- NICATIONS	COMPUTERS	CONSTRUC- TION & CIVIL ENGR	EDUCA- TIONAL, INFOR- MATION SERVICES
- - - - -	11,900	200	1,300	100	1,200	300	200	2,300	700
- - - - -	4,000	-----	900	-----	300	200	100	600	300
- - - - -	1,900	100	-----	-----	200	-----	-----	400	100
- - - - -	1,200	100	100	-----	-----	-----	-----	400	100
- - - - -	4,800	100	300	-----	700	100	100	800	300
- - - - -	29,500	300	2,200	100	2,800	400	900	3,500	1,300
- - - - -	900	-----	-----	-----	-----	-----	-----	200	100
- - - - -	5,100	100	200	-----	600	100	-----	700	200
- - - - -	4,300	-----	200	-----	100	100	100	500	200
- - - - -	19,200	200	1,800	100	2,000	200	700	2,000	800
- - - - -	14,800	300	1,200	-----	300	200	500	2,500	1,000
- - - - -	3,100	100	200	-----	-----	-----	200	400	200
- - - - -	4,800	100	500	-----	100	100	100	900	300
- - - - -	900	100	-----	-----	100	-----	-----	200	100
- - - - -	800	-----	-----	-----	-----	-----	-----	200	100
- - - - -	900	-----	-----	-----	-----	-----	-----	200	100
- - - - -	2,000	-----	200	-----	-----	-----	100	300	100
- - - - -	1,600	-----	200	-----	-----	-----	-----	200	100
- - - - -	500	-----	-----	-----	-----	-----	-----	100	-----
- - - - -	50,700	600	11,800	200	1,300	900	2,300	9,200	1,700
- - - - -	600	-----	-----	-----	-----	-----	-----	300	-----
- - - - -	41,400	400	10,100	200	1,000	800	2,100	6,800	1,200
- - - - -	1,000	100	-----	-----	-----	-----	-----	400	100
- - - - -	1,700	-----	-----	-----	-----	-----	-----	600	100
- - - - -	6,000	100	1,600	-----	300	100	100	1,100	300
- - - - -	500	-----	-----	-----	-----	-----	-----	300	100
- - - - -	-----	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	500	-----	-----	-----	-----	-----	-----	200	100
- - - - -	2,200	-----	200	-----	100	100	100	700	100

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL  
CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY

GENERAL CHARACTERISTICS

	ELEC- TRICAL EQUIP- MENT, SERVICES	ELEC- TRONIC EQUIP- MENT, SERVICES	LAB., SCI., PHOTO., OPTICAL EQUIPMENT
--	--	--	--

GEOGRAPHIC LOCATION, CONTINUED

EAST SOUTH CENTRAL - - - - -	800	400	100
ALABAMA - - - - -	200	200	-----
KENTUCKY - - - - -	200	100	-----
MISSISSIPPI - - - - -	-----	-----	-----
TENNESSEE - - - - -	400	100	-----
WEST SOUTH CENTRAL - - - - -	1,000	1,300	100
ARKANSAS - - - - -	100	-----	-----
LOUISIANA - - - - -	200	100	-----
OKLAHOMA - - - - -	100	100	-----
TEXAS - - - - -	600	1,200	100
MOUNTAIN - - - - -	500	1,100	100
ARIZONA - - - - -	100	400	-----
COLORADO - - - - -	200	300	100
IDAHO - - - - -	-----	-----	-----
MONTANA - - - - -	100	-----	-----
NEVADA - - - - -	-----	-----	-----
NEW MEXICO - - - - -	100	200	-----
UTAH - - - - -	100	100	-----
WYOMING - - - - -	-----	-----	-----
PACIFIC - - - - -	2,000	4,600	500
ALASKA - - - - -	-----	-----	-----
CALIFORNIA - - - - -	1,400	4,300	500
HAWAII - - - - -	100	-----	-----
OREGON - - - - -	200	100	-----
WASHINGTON - - - - -	300	200	-----
OUTLYING AREAS - - - - -	-----	-----	-----
CANAL ZONE - - - - -	-----	-----	-----
GUAM - - - - -	-----	-----	-----
PUERTO RICO - - - - -	-----	-----	-----
VIRGIN ISLANDS - - - - -	-----	-----	-----
FOREIGN - - - - -	100	-----	-----

# NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES--CONTINUED

### PRODUCTS OR SERVICES

ERISTICS

ELEC- TRICAL EQUIP- MENT, SERVICES	ELEC- TRONIC EQUIP- MENT, SERVICES	LAB.,SCI., PHOTO., OPTICAL EQUIPMENT	MACHINERY, MECHANICAL EQUIPMENT	MARINE TRANS- PORTATION	MEDICAL, HEALTH SERVICES	METALS, BASIC (EXCEPT MINING)	METAL FABRICATED PRODUCTS	MINING
--	--	---	---------------------------------------	-------------------------------	--------------------------------	--	---------------------------------	--------

INUED

-	800	400	100	1,000	100	-----	500	300	300
-	200	200	-----	200	-----	-----	200	100	100
-	200	100	-----	200	-----	-----	100	100	100
-	-----	-----	-----	100	100	-----	-----	-----	-----
-	400	100	-----	500	-----	-----	300	200	100
-	1,000	1,300	100	2,200	200	100	600	500	300
-	100	-----	-----	100	-----	-----	-----	-----	-----
-	200	100	-----	400	200	-----	100	100	-----
-	100	100	-----	300	-----	-----	100	100	100
-	600	1,200	100	1,400	100	-----	400	300	200
-	500	1,100	100	800	-----	100	700	100	1,800
-	100	400	-----	100	-----	-----	200	-----	400
-	200	300	100	300	-----	-----	200	100	400
-	-----	-----	-----	100	-----	-----	-----	-----	100
-	100	-----	-----	-----	-----	-----	-----	-----	100
-	-----	-----	-----	-----	-----	-----	100	-----	200
-	100	200	-----	100	-----	-----	100	-----	100
-	100	100	-----	100	-----	-----	100	-----	400
-	-----	-----	-----	-----	-----	-----	-----	-----	100
-	2,000	4,600	500	2,800	800	200	1,000	500	700
-	-----	-----	-----	-----	-----	-----	-----	-----	100
-	1,400	4,300	500	2,200	600	200	800	400	500
-	100	-----	-----	-----	100	-----	-----	-----	-----
-	200	100	-----	200	-----	-----	100	-----	-----
-	300	200	-----	400	100	-----	200	-----	100
-	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	100	-----	-----	100	-----	-----	100	-----	100



NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL  
CHARACTERISTICS OF ENGINEERS MEETING CRITERIA

PROD

GENERAL CHARACTERISTICS

MOTOR  
VEHICLE  
TRANS-  
PORTATION      ORDNANCE      PETROLEUM

GEOGRAPHIC LOCATION, CONTINUED

EAST SOUTH CENTRAL	- - - - -	-----	300	100
ALABAMA	- - - - -	-----	200	-----
KENTUCKY	- - - - -	-----	-----	-----
MISSISSIPPI	- - - - -	-----	-----	100
TENNESSEE	- - - - -	-----	-----	-----
WEST SOUTH CENTRAL	- - - - -	-----	100	8,700
ARKANSAS	- - - - -	-----	-----	100
LOUISIANA	- - - - -	-----	-----	1,500
OKLAHOMA	- - - - -	-----	-----	1,800
TEXAS	- - - - -	-----	100	5,300
MOUNTAIN	- - - - -	-----	400	1,000
ARIZONA	- - - - -	-----	100	-----
COLORADO	- - - - -	-----	-----	500
IDAHO	- - - - -	-----	-----	-----
MONTANA	- - - - -	-----	-----	100
NEVADA	- - - - -	-----	-----	-----
NEW MEXICO	- - - - -	-----	200	200
UTAH	- - - - -	-----	100	-----
WYOMING	- - - - -	-----	-----	200
PACIFIC	- - - - -	100	1,500	1,700
ALASKA	- - - - -	-----	-----	100
CALIFORNIA	- - - - -	100	1,300	1,600
HAWAII	- - - - -	-----	-----	-----
OREGON	- - - - -	-----	-----	-----
WASHINGTON	- - - - -	-----	100	-----
OUTLYING AREAS	- - - - -	-----	-----	-----
CANAL ZONE	- - - - -	-----	-----	-----
GUAM	- - - - -	-----	-----	-----
PUERTO RICO	- - - - -	-----	-----	-----
VIRGIN ISLANDS	- - - - -	-----	-----	-----
FOREIGN	- - - - -	-----	-----	200

NOTE - GROUPS MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES--CONTINUED

## PRODUCTS OR SERVICES

## CHARACTERISTICS

MOTOR  
VEHICLE  
TRANS-  
PORTATION

ORDNANCE

PETROLEUM

RAILWAY,  
RAPID  
TRANSIT

UTILITIES

OTHER  
PRODUCTS,  
SERVICESNO REPORT  
OF PRODUCTS  
OR SERVICES

## CONTINUED

AL	-----	300	100	-----	700	500	500
-	-----	200	-----	-----	200	200	100
-	-----	-----	-----	-----	100	100	100
-	-----	-----	100	-----	100	-----	100
-	-----	-----	-----	-----	400	200	200
AL	-----	100	8,700	-----	1,300	500	1,200
-	-----	-----	100	-----	100	-----	-----
-	-----	-----	1,500	-----	300	100	100
-	-----	-----	1,800	-----	200	100	200
-	-----	100	5,300	-----	700	300	800
-	-----	400	1,000	-----	700	300	900
-	-----	100	-----	-----	300	-----	300
-	-----	-----	500	-----	200	100	300
-	-----	-----	-----	-----	100	-----	-----
-	-----	-----	100	-----	-----	-----	-----
-	-----	-----	-----	-----	100	-----	-----
-	-----	200	200	-----	-----	-----	100
-	-----	100	-----	-----	-----	-----	100
-	-----	-----	200	-----	-----	-----	-----
-	100	1,500	1,700	200	2,000	1,600	2,500
-	-----	-----	100	-----	-----	-----	-----
-	100	1,300	1,600	200	1,400	1,200	2,100
-	-----	-----	-----	-----	100	-----	-----
-	-----	-----	-----	-----	200	100	100
-	-----	100	-----	-----	300	300	200
-	-----	-----	-----	-----	-----	-----	-----
-	-----	-----	-----	-----	-----	-----	-----
-	-----	-----	-----	-----	-----	-----	-----
-	-----	-----	-----	-----	-----	-----	-----
S	-----	-----	-----	-----	-----	-----	-----
-	-----	-----	200	-----	-----	100	100

ADD TO TOTAL BECAUSE OF ROUNDING.

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL  
CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY

GENERAL CHARACTERISTICS	TOTAL	BACHELOR'S DEGREE				
		TOTAL REPORT- ING BS DEGREE	AERO- SPACE	CHEMICAL	CIVIL	ELECTRICAL
TOTAL ENGINEERS REPORTING -	308,000	279,900	11,800	28,200	48,200	62,700
HIGHEST DEGREE						
DOCTORATE - - - - -	24,500	21,900	900	4,500	2,900	3,600
PROFESSIONAL MEDICAL - -	100	100	---	---	---	---
PROFESSIONAL ENGINEER -	13,200	4,900	200	400	1,100	---
MASTER'S - - - - -	71,100	67,600	3,700	7,500	11,400	14,000
BACHELOR'S - - - - -	185,300	185,300	7,100	15,700	32,900	44,000
LESS THAN BACHELOR'S -	9,400	---	---	---	---	---
OTHER - - - - -	400	---	---	---	---	---
NO REPORT - - - - -	4,000	---	---	---	---	---
STUDENT STATUS						
FULL-TIME - - - - -	2,900	2,800	100	300	600	2,000
PART-TIME - - - - -	11,700	11,000	700	1,000	1,500	2,500
NO REPORT - - - - -	293,400	266,100	11,000	26,800	46,100	60,200
PROFESSIONAL IDENTIFICATION						
ENGINEER - - - - -	254,700	230,800	10,100	22,600	42,900	55,200
ARCHITECT - - - - -	400	400	---	---	300	---
PHYSICIST - - - - -	1,200	1,100	---	100	---	---
CHEMIST - - - - -	1,000	900	---	700	---	---
GEOLOGIST - - - - -	2,600	2,500	---	---	---	---
MATHEMATICIAN - - - - -	300	300	---	100	---	---
METALLURGIST - - - - -	7,400	6,700	100	800	100	---
TECHNICIAN - - - - -	600	500	---	---	100	---
OTHER - - - - -	30,900	28,600	1,200	3,100	3,300	5,000
NO REPORT - - - - -	8,800	8,000	300	800	1,500	1,000
REGISTERED ENGINEERS						
YES - - - - -	131,100	118,100	2,400	8,600	33,800	24,300
NO - - - - -	171,400	156,800	9,300	19,000	13,700	37,400
NO REPORT - - - - -	5,400	4,900	200	600	700	1,000
PROFESSIONAL EMPLOY. STATUS						
PROFESSIONALLY EMPLOYED	293,600	268,400	11,500	27,100	45,400	60,000
SEEKING EMPLOYMENT - - -	2,000	1,800	100	200	300	---
NOT SEEKING EMPLOYMENT -	10,700	8,300	100	700	2,200	1,000
NO REPORT - - - - -	1,600	1,400	---	200	300	---

# NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY BACHELOR'S DEGREE CURRICULA GROUPS

CHARACTERISTICS	BACHELOR'S DEGREE CURRICULA GROUPS												
	TOTAL	TOTAL REPORT- ING BS DEGREE	AERO- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL	GENERAL	MECHAN- ICAL	METAL- LURGICAL	MINERAL	OTHER	NO REPORT OF CUR- RICULUM	NO REPORT OF BS DEGREE
REPORTING -	308,000	279,800	11,800	28,200	48,200	62,800	20,400	60,500	10,300	13,800	22,200	1,500	28,100
- - - -	24,500	21,900	900	4,500	2,900	3,000	1,200	4,000	1,800	800	2,600	200	2,500
ICAL - -	100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
ENGINEER -	13,200	4,900	200	400	1,100	800	500	900	100	300	500	100	8,300
- - - -	71,100	67,600	3,700	7,500	11,400	14,100	5,000	13,600	2,300	2,600	6,700	700	5,500
- - - -	185,300	185,300	7,100	15,700	32,900	44,800	13,700	42,000	6,200	10,200	12,400	400	-----
OR'S - -	9,400	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	9,400
- - - -	400	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	400
- - - -	4,000	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	4,000
- - - -	2,900	2,800	100	300	600	200	200	400	400	300	200	-----	100
- - - -	11,700	11,000	700	1,000	1,500	2,300	1,400	2,700	500	100	700	-----	700
- - - -	293,400	266,100	11,000	26,800	46,100	60,400	18,800	57,400	9,400	13,400	21,300	1,500	27,300
IFICATION													
- - - -	254,700	230,800	10,100	22,600	42,900	55,000	15,600	51,800	4,600	9,400	17,600	1,200	23,900
- - - -	400	400	-----	-----	300	-----	-----	-----	-----	-----	-----	-----	-----
- - - -	1,200	1,100	-----	100	-----	300	200	100	-----	-----	300	-----	100
- - - -	1,000	900	-----	700	-----	-----	-----	-----	-----	-----	100	-----	100
- - - -	2,600	2,500	-----	-----	-----	-----	-----	-----	-----	2,200	100	-----	100
- - - -	300	300	-----	100	-----	100	-----	100	-----	-----	100	-----	-----
- - - -	7,400	6,700	100	800	100	-----	400	300	4,500	200	400	100	700
- - - -	600	500	-----	-----	100	100	100	100	-----	-----	100	-----	200
- - - -	30,900	28,600	1,200	3,100	3,300	5,900	3,500	6,300	900	1,500	2,800	200	2,200
- - - -	8,800	8,000	300	800	1,500	1,400	600	1,900	300	400	700	100	800
S													
- - - -	131,100	118,100	2,400	8,600	33,800	24,700	5,900	27,200	2,000	5,400	7,200	900	13,000
- - - -	171,400	156,800	9,300	19,000	13,700	37,100	14,000	32,500	8,100	8,200	14,500	600	14,600
- - - -	5,400	4,900	200	600	700	1,100	500	800	200	300	500	-----	500
STATUS													
EMPLOYED	293,600	268,400	11,500	27,100	45,400	60,900	19,600	58,500	9,800	13,000	21,200	1,300	25,200
NT - - -	2,000	1,800	100	200	300	200	200	400	100	100	200	-----	300
YMENT -	10,700	8,300	100	700	2,200	1,500	500	1,400	300	600	800	200	2,400
- - - -	1,600	1,400	-----	200	300	200	100	300	100	100	100	-----	200

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY BACHELOR'S DEGREE

GENERAL CHARACTERISTICS	TOTAL	TOTAL REPORT- ING BS DEGREE	AERO- SPACE	CHEMICAL	CIVIL	ELECTRICAL
<b>PRODUCTS OR SERVICES</b>						
AGRICULTURE AND FOOD - - - - -	4,000	3,800	100	700	400	
AIRCRAFT AND SPACE - - - - -	33,000	30,800	7,400	1,200	1,400	500
CERAMICS - - - - -	2,100	2,000	---	300	300	
CHEMICALS, ALLIED PROD. - - - - -	19,500	18,400	100	11,800	500	
COMMUNICATIONS - - - - -	7,700	6,600	100	100	100	400
COMPUTERS - - - - -	11,000	10,300	200	500	500	500
CONSTRUCTION, CIVIL ENGR. - - - - -	45,900	42,300	300	1,000	31,900	100
EDUC., INFORMATION SERV. - - - - -	14,600	13,500	500	1,500	2,500	200
ELECTRICAL EQUIP., SERV. - - - - -	19,200	17,100	200	400	300	11,000
ELECTRONIC EQUIP., SERV. - - - - -	23,000	21,000	300	500	200	14,000
LAB-SCI-PHOTO-OPT EQUIP. - - - - -	2,800	2,400	100	200	100	
MACHINERY, MECH. EQUIP. - - - - -	28,400	25,200	500	1,100	1,100	100
MARINE TRANSPORTATION - - - - -	4,800	4,200	200	100	400	
MEDICAL, HEALTH SERVICES - - - - -	1,300	1,200	---	200	100	
METALS, BASIC - - - - -	12,600	11,500	200	1,500	400	
METAL FABRICATED PROD. - - - - -	6,300	5,500	100	400	800	
MINING - - - - -	5,900	5,000	---	200	300	
MOTOR VEHICLE TRANS. - - - - -	2,500	2,300	100	100	200	
ORDNANCE - - - - -	5,200	4,800	500	300	200	100
PETROLEUM - - - - -	15,500	14,600	200	3,000	800	
RAILWAY, RAPID TRANSIT - - - - -	1,500	1,300	---	---	400	
UTILITIES - - - - -	14,700	13,500	100	400	1,600	200
OTHER PRODUCTS, SERVICES - - - - -	11,300	10,400	300	1,400	1,000	100
NO REPORT - - - - -	15,200	12,300	300	1,300	2,800	200
<b>AREAS OF TECHNOLOGY</b>						
BIOMEDICAL - - - - -	1,600	1,500	100	300	200	
BEHAVIORAL AND SOCIAL - - - - -	4,100	3,800	100	900	500	
CHEMICAL AND MATERIALS - - - - -	11,700	10,900	200	5,000	600	
METALLURGICAL - - - - -	12,100	10,900	100	1,400	200	
EARTH, ATMOSPHERE, MARINE - - - - -	9,900	8,900	100	300	1,500	
ENVIRONMENTAL, STRUCTURAL - - - - -	33,700	31,100	1,000	1,100	20,600	300
ELECTROMAGNETIC - - - - -	42,800	38,300	400	300	600	300
DYNAMICS AND MECHANICS - - - - -	40,100	36,600	4,300	1,600	2,500	100
HEAT, LIGHT, APPL. PHYSICS - - - - -	8,500	7,800	400	1,000	200	100
NUCLEAR - - - - -	2,600	2,400	100	400	100	
ENGR. PROCESS-APPLICATION - - - - -	32,100	29,400	900	5,600	8,900	200
AUTOMATION AND CONTROL - - - - -	12,400	11,300	400	900	400	500
WORK MGMT, EVALUATION - - - - -	56,500	51,700	2,200	5,600	5,300	100
INFORMATION, MATHEMATICS - - - - -	11,500	10,800	600	900	1,400	300
OTHER - - - - -	9,700	8,900	500	1,300	1,600	100
NO REPORT - - - - -	18,700	15,500	500	1,600	3,500	200

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## STATISTICS OF ENGINEERS MEETING CRITERIA BY BACHELOR'S DEGREE CURRICULA GROUPS--CONTINUED

## BACHELOR'S DEGREE CURRICULA GROUPS

TOTAL	TOTAL REPORT- ING BS DEGREE	AERO- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL	GENERAL	MECHAN- ICAL	METAL- LURGICAL	MINERAL	OTHER	NO REPORT OF CUR- RICULUM	NO REPORT OF BS DEGREE
4,000	3,800	100	700	400	200	400	600	-----	-----	1,600	-----	200
33,000	30,800	7,400	1,200	1,400	5,200	2,700	9,400	700	200	2,300	200	2,200
2,100	2,000	-----	300	300	200	200	400	200	100	300	-----	100
19,500	18,400	100	11,800	500	800	1,000	2,600	300	200	1,100	100	1,100
7,700	6,600	100	100	100	4,600	500	500	-----	-----	600	-----	1,100
11,000	10,300	200	500	500	5,300	1,200	1,300	100	200	900	100	700
45,900	42,300	300	1,000	31,900	1,300	1,200	3,500	100	700	2,100	200	3,600
14,600	13,500	500	1,500	2,500	2,100	1,100	3,500	400	500	1,300	100	1,100
19,200	17,100	200	400	300	11,600	1,000	2,600	200	-----	800	100	2,100
23,000	21,000	300	500	200	14,100	1,600	1,900	200	-----	2,100	100	2,000
2,800	2,400	100	200	100	700	300	700	-----	-----	200	-----	400
28,400	25,200	500	1,100	1,100	1,700	2,100	15,300	500	400	2,200	100	3,200
4,800	4,200	200	100	400	400	500	1,500	100	-----	1,000	-----	600
1,300	1,200	-----	200	100	200	200	300	-----	-----	100	-----	100
12,600	11,500	200	1,500	400	600	1,000	1,400	5,100	300	800	100	1,200
6,300	5,500	100	400	800	300	800	2,100	800	100	300	-----	700
5,900	5,000	-----	200	300	200	100	200	300	3,400	200	-----	1,000
2,500	2,300	100	100	200	300	300	900	200	-----	200	-----	200
5,200	4,800	500	300	200	1,400	500	1,600	100	-----	400	-----	300
15,500	14,600	200	3,000	800	700	500	2,200	100	6,300	700	100	900
1,500	1,300	-----	-----	400	300	100	400	-----	-----	100	-----	200
14,700	13,500	100	400	1,600	7,000	500	3,000	100	200	600	100	1,300
11,300	10,400	300	1,400	1,000	1,400	1,900	2,500	200	300	1,200	100	900
15,200	12,300	300	1,300	2,800	2,200	900	2,200	600	800	1,100	200	2,900
1,600	1,500	100	300	200	300	100	300	-----	-----	300	-----	100
4,100	3,800	100	900	500	500	300	600	100	500	500	-----	300
11,700	10,900	200	5,000	600	500	500	1,600	1,300	200	800	100	800
12,100	10,900	100	1,400	200	200	500	900	6,400	500	700	100	1,200
9,900	8,900	100	300	1,500	500	300	800	100	4,500	900	-----	1,000
33,700	31,100	1,000	1,100	20,600	800	1,100	3,700	-----	500	2,200	200	2,600
42,800	38,300	400	300	600	30,400	1,300	2,600	100	100	2,300	200	4,500
40,100	36,600	4,300	1,600	2,500	1,600	2,200	21,100	200	500	2,400	200	3,500
8,500	7,800	400	1,000	200	1,400	600	3,100	200	100	800	100	600
2,600	2,400	100	400	100	300	200	900	100	-----	200	-----	100
32,100	29,400	900	5,600	8,900	2,800	1,400	4,200	400	2,800	2,300	100	2,700
12,400	11,300	400	900	400	5,000	900	2,400	100	100	1,000	100	1,100
56,500	51,700	2,200	5,600	5,300	10,700	8,200	12,100	700	1,900	4,800	200	4,900
11,500	10,800	600	900	1,400	3,900	1,100	1,700	100	300	900	-----	700
9,700	8,900	500	1,300	1,600	1,200	700	1,800	100	700	1,000	-----	800
15,500	15,500	500	1,600	3,500	2,700	1,100	2,900	600	1,100	1,400	200	3,200

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY BACHELOR'S DEGREE

		BACHELOR'S DEGREE					
GENERAL CHARACTERISTICS	TOTAL	TOTAL REPORT- ING BS DEGREE	AERO- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL	GENERA
TYPE OF EMPLOYER							
PRIV. INDUSTRY, BUSINESS -	211,100	192,600	7,800	22,600	21,800	48,500	14,500
SELF-EMPLOYED - - - - -	11,400	9,600	200	400	3,200	1,400	600
COLLEGE, UNIVERSITY - - -	20,200	18,600	900	2,000	3,600	2,600	1,200
JR. COLLEGE, TECH. INST. -	900	900	-----	100	100	200	100
SEC., ELEM., OTHER SCHOOL	300	200	-----	-----	100	-----	-----
NONPROFIT ORGANIZATION -	5,400	5,000	400	400	700	1,200	400
FEDERAL GOVERNMENT - - -	24,600	23,000	1,400	900	6,300	4,800	1,600
USPHS, MILITARY SERVICE -	4,900	4,700	500	200	1,300	300	700
STATE GOVERNMENT - - - -	5,900	5,500	-----	100	4,300	200	100
LOCAL GOVERNMENT - - - -	4,800	4,400	-----	100	3,000	600	100
OTHER - - - - -	4,600	4,100	200	300	1,200	1,000	200
NO REPORT - - - - -	14,000	11,200	300	1,100	2,600	2,000	800
FUNCTIONS							
DESIGN - - - - -	53,600	48,800	1,900	3,000	12,100	13,300	2,100
DEVELOPMENT - - - - -	32,300	30,200	2,100	4,300	1,800	8,800	1,800
RESEARCH - - - - -	22,000	20,600	1,700	3,200	2,000	2,900	1,200
PRODUCTION - - - - -	56,600	51,400	1,100	5,400	7,900	10,600	4,100
CONTROL - - - - -	104,700	94,800	3,600	8,800	17,700	21,100	8,700
TEACHING - - - - -	14,700	13,600	600	1,400	2,700	2,000	1,000
OTHER - - - - -	6,200	5,700	400	600	700	1,300	700
NO REPORT - - - - -	17,900	14,800	500	1,500	3,100	2,800	1,000
SUPERVISORY LEVEL							
NO REG. SUPV. GIVEN - - -	52,200	47,900	2,600	4,600	7,000	10,000	3,800
INDIRECT OR STAFF - - - -	50,400	46,500	2,200	4,900	6,800	10,400	3,700
TEAM OR UNIT - - - - -	33,900	31,400	1,700	3,400	4,600	8,500	2,100
PROJECT OR SECTION - - -	61,700	56,500	2,200	5,400	10,600	13,900	3,400
MAJOR DEPT., DIV., PROGRAM	56,900	51,500	1,700	5,700	8,600	11,700	4,100
GEN. MGMT OF ORGANIZATION	28,800	25,600	800	2,100	6,400	4,300	1,900
NO REPORT - - - - -	24,000	20,400	600	2,000	4,300	4,100	1,400

# NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## STATISTICS OF ENGINEERS MEETING CRITERIA BY BACHELOR'S DEGREE CURRICULA GROUPS--CONTINUED

### BACHELOR'S DEGREE CURRICULA GROUPS

TOTAL	TOTAL REPORT- ING BS DEGREE	AERO- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL	GENERAL	MECHAN- ICAL	METAL- LURGICAL	MINERAL	OTHER	NO REPORT OF CUR- RICULUM	NO REPORT OF BS DEGREE
11,100	192,600	7,800	22,600	21,800	48,500	14,500	45,100	7,600	10,100	13,700	900	18,500
11,400	9,600	200	400	3,200	1,400	600	2,000	200	800	600	100	1,800
20,200	18,600	900	2,000	3,600	2,600	1,200	4,200	900	600	2,400	100	1,600
900	900	-----	100	100	200	100	200	-----	-----	100	-----	100
300	200	-----	-----	100	-----	-----	-----	-----	-----	-----	-----	-----
5,400	5,000	400	400	700	1,200	400	900	300	100	500	-----	400
24,600	23,000	1,400	900	6,300	4,800	1,600	3,900	500	800	2,600	100	1,600
4,900	4,700	500	200	1,300	300	700	900	100	100	500	-----	100
5,900	5,500	-----	100	4,300	200	100	300	-----	200	300	-----	400
4,800	4,400	-----	100	3,000	600	100	300	-----	-----	200	-----	400
4,600	4,100	200	300	1,200	1,000	200	700	100	100	300	-----	400
14,000	11,200	300	1,100	2,600	2,000	800	2,000	500	800	1,000	200	2,800
53,600	48,800	1,900	3,000	12,100	13,300	2,100	12,400	200	500	3,100	200	4,800
22,300	30,200	2,100	4,300	1,800	8,800	1,800	6,800	1,700	600	2,200	100	2,100
22,000	20,600	1,700	3,200	2,000	2,900	1,200	3,900	2,300	700	2,600	200	1,400
56,600	51,400	1,100	5,400	7,900	10,600	4,100	11,700	2,500	4,500	3,300	300	5,200
54,700	54,800	3,600	8,800	17,700	21,100	8,700	18,500	2,300	5,700	7,700	500	9,900
4,700	13,600	600	1,400	2,700	2,000	1,000	3,300	500	500	1,500	100	1,100
6,200	5,700	400	600	700	1,300	700	1,200	100	300	500	-----	500
7,900	14,800	500	1,500	3,100	2,800	1,000	2,800	600	1,000	1,300	200	3,200
2,200	47,900	2,600	4,600	7,000	10,000	3,800	11,600	2,300	2,100	3,800	200	4,300
10,400	46,500	2,200	4,900	6,800	10,400	3,700	10,200	1,900	2,500	3,700	300	3,800
13,900	31,400	1,700	3,400	4,600	8,500	2,100	6,500	1,000	1,200	2,500	100	2,500
1,700	56,500	2,200	5,400	10,600	13,900	3,400	11,800	1,800	2,400	4,700	200	5,300
6,900	51,500	1,700	5,700	8,600	11,700	4,100	10,900	1,800	2,800	3,900	300	5,400
8,800	25,600	800	2,100	6,400	4,300	1,900	5,700	600	1,600	1,900	300	3,200
4,000	20,400	600	2,000	4,300	4,100	1,400	3,900	900	1,300	1,700	200	3,600



**NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY BACHELOR'S DEGREE**

GENERAL CHARACTERISTICS	TOTAL	BACHELOR'S DEGREE					
		TOTAL REPORT- ING BS DEGREE	AERO- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL	GENERA
ALL GEOGRAPHIC LOCATIONS -	308,000	279,800	11,800	28,200	48,200	62,800	20,400
NEW ENGLAND - - - - -	21,800	19,500	800	1,600	2,600	5,500	1,400
CONNECTICUT - - - - -	6,600	6,000	300	500	600	1,300	500
MAINE - - - - -	700	600	-----	100	200	100	-----
MASSACHUSETTS - - - - -	12,300	10,800	400	900	1,300	3,600	700
NEW HAMPSHIRE - - - - -	900	800	-----	100	100	200	100
RHODE ISLAND - - - - -	1,000	900	-----	100	200	200	100
VERMONT - - - - -	500	400	-----	-----	100	100	-----
MIDDLE ATLANTIC - - - - -	66,400	59,500	1,600	7,600	8,100	15,500	4,300
NEW JERSEY - - - - -	14,500	12,800	200	2,400	1,300	3,900	900
NEW YORK - - - - -	29,200	26,000	900	3,000	4,000	6,700	1,900
PENNSYLVANIA - - - - -	22,700	20,700	500	2,300	2,800	4,900	1,500
EAST NORTH CENTRAL - - - - -	52,200	47,200	1,400	4,900	7,200	10,400	3,400
ILLINOIS - - - - -	14,800	13,300	200	1,400	2,600	2,900	900
INDIANA - - - - -	5,800	5,400	100	500	700	1,300	400
MICHIGAN - - - - -	9,200	8,500	300	1,100	1,200	1,800	600
OHIO - - - - -	17,500	15,400	800	1,600	1,600	3,300	1,300
WISCONSIN - - - - -	5,000	4,600	100	300	1,000	1,100	200
WEST NORTH CENTRAL - - - - -	18,500	17,400	700	1,500	4,000	3,700	1,000
IOWA - - - - -	2,800	2,600	100	200	500	700	200
KANSAS - - - - -	2,000	1,900	100	100	500	300	100
MINNESOTA - - - - -	4,600	4,300	200	300	600	1,200	200
MISSOURI - - - - -	7,000	6,500	300	900	1,600	1,200	400
NEBRASKA - - - - -	1,500	1,400	-----	-----	500	200	100
NORTH DAKOTA - - - - -	300	300	-----	-----	100	100	-----
SOUTH DAKOTA - - - - -	400	300	-----	-----	100	100	-----
SOUTH ATLANTIC - - - - -	39,300	35,700	1,700	3,600	7,200	7,700	3,100
DELAWARE - - - - -	2,100	1,900	-----	700	200	300	100
DISTRICT OF COLUMBIA - - - - -	5,900	5,300	300	200	1,200	1,100	600
FLORIDA - - - - -	6,700	5,900	400	300	1,100	1,500	500
GEORGIA - - - - -	3,100	3,000	200	200	700	600	400
MARYLAND - - - - -	7,600	6,900	300	400	1,300	2,000	500
NORTH CAROLINA - - - - -	3,700	3,400	-----	300	700	700	400
SOUTH CAROLINA - - - - -	2,000	1,800	100	200	400	200	100
VIRGINIA - - - - -	6,300	5,800	400	500	1,300	1,300	300
WEST VIRGINIA - - - - -	2,000	1,900	-----	700	300	100	100

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969  
 OF ENGINEERS MEETING CRITERIA BY BACHELOR'S DEGREE CURRICULA GROUPS--CONTINUED

BACHELOR'S DEGREE CURRICULA GROUPS

TOTAL	TOTAL REPORT- ING BS DEGREE	AERO- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL	GENERAL	MECHAN- ICAL	METAL- LURGICAL	MINERAL	OTHER	NO REPORT OF CUR- RICULUM	NO REPORT OF BS DEGREE
000	279,800	11,800	28,200	48,200	62,800	20,400	60,500	10,300	13,800	22,200	1,500	28,100
000	19,500	800	1,600	2,600	5,500	1,400	4,800	700	200	1,700	100	2,400
000	6,000	300	500	600	1,300	500	1,900	300	100	400	100	600
700	600	-----	100	200	100	-----	100	-----	-----	100	-----	100
000	10,800	400	900	1,300	3,600	700	2,400	300	100	1,000	-----	1,500
000	800	-----	100	100	200	100	200	-----	-----	100	-----	100
000	900	-----	100	200	200	100	200	-----	-----	100	-----	100
000	400	-----	-----	100	100	-----	100	-----	-----	-----	-----	-----
000	59,500	1,600	7,600	8,100	15,500	4,300	13,300	3,100	1,400	4,200	400	6,900
000	12,800	200	2,400	1,300	3,900	900	2,900	400	100	700	100	1,700
000	26,000	900	3,000	4,000	6,700	1,900	5,700	1,000	600	2,000	200	3,200
000	20,700	500	2,300	2,800	4,900	1,500	4,700	1,700	700	1,500	100	2,000
000	47,200	1,400	4,900	7,200	10,400	3,400	11,600	3,400	1,000	3,600	300	5,100
000	13,300	200	1,400	2,600	2,900	900	3,100	600	400	1,200	100	1,500
000	5,400	100	500	700	1,300	400	1,300	400	100	600	-----	400
000	8,500	300	1,100	1,200	1,800	600	2,100	600	200	500	-----	700
000	15,400	800	1,600	1,600	3,300	1,300	3,800	1,600	200	1,100	100	2,100
000	4,600	100	300	1,000	1,100	200	1,400	100	100	300	-----	400
000	17,400	700	1,500	4,000	3,700	1,000	3,500	400	800	1,700	-----	1,200
000	2,600	100	200	500	700	200	600	-----	-----	400	-----	100
000	1,900	100	100	500	300	100	400	-----	200	200	-----	200
000	4,300	200	300	600	1,200	200	900	200	200	400	-----	300
000	6,500	300	900	1,600	1,200	400	1,200	100	200	400	-----	500
000	1,400	-----	-----	500	200	100	400	-----	-----	200	-----	100
000	300	-----	-----	100	100	-----	100	-----	-----	-----	-----	-----
000	300	-----	-----	100	100	-----	100	-----	100	-----	-----	-----
000	35,700	1,700	3,600	7,200	7,700	3,100	7,300	700	900	3,300	200	3,600
000	1,900	-----	700	200	300	100	500	-----	-----	100	-----	200
000	5,300	300	200	1,200	1,100	600	900	100	200	600	100	500
000	5,900	400	300	1,100	1,500	500	1,300	100	200	400	-----	900
000	3,000	200	200	700	600	400	500	-----	-----	300	-----	200
000	6,900	300	400	1,300	2,000	500	1,500	100	-----	800	-----	700
000	3,400	-----	300	700	700	400	800	-----	-----	300	-----	300
000	1,800	100	200	400	200	100	500	-----	-----	200	-----	200
000	5,800	400	500	1,300	1,300	300	1,100	100	100	600	-----	500
000	1,900	-----	700	300	100	100	300	100	200	100	-----	100

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NATIONAL REGISTER OF SCIENTIFIC AND  
CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY BA

GENERAL CHARACTERISTICS			TOTAL	TOTAL REPORT- ING BS DEGREE	AERO- SPACE	CHEMICAL	CIVIL
GEOGRAPHIC LOCATION, CONTINUED							
EAST SOUTH CENTRAL	- - -		11,900	11,000	400	1,100	2,300
ALABAMA	- - - - -		4,000	3,800	200	400	600
KENTUCKY	- - - - -		1,900	1,700	-----	200	400
MISSISSIPPI	- - - - -		1,200	1,100	-----	-----	400
TENNESSEE	- - - - -		4,800	4,400	200	500	900
WEST SOUTH CENTRAL	- - -		29,500	27,400	1,000	4,000	3,900
ARKANSAS	- - - - -		900	800	-----	100	200
LOUISIANA	- - - - -		5,100	4,600	100	700	900
OKLAHOMA	- - - - -		4,300	4,000	100	500	500
TEXAS	- - - - -		19,200	18,000	800	2,600	2,400
MOUNTAIN	- - - - -		14,800	13,200	300	800	2,800
ARIZONA	- - - - -		3,100	2,700	-----	100	400
COLORADO	- - - - -		4,800	4,300	200	300	1,000
IDAHO	- - - - -		900	900	-----	100	200
MONTANA	- - - - -		800	800	-----	100	200
NEVADA	- - - - -		900	800	-----	-----	200
NEW MEXICO	- - - - -		2,000	1,800	100	100	300
UTAH	- - - - -		1,600	1,500	-----	100	300
WYOMING	- - - - -		500	400	-----	-----	100
PACIFIC	- - - - -		50,700	46,400	3,800	2,800	9,200
ALASKA	- - - - -		600	500	-----	-----	200
CALIFORNIA	- - - - -		41,400	37,700	3,100	2,400	6,700
HAWAII	- - - - -		1,000	900	-----	-----	400
OREGON	- - - - -		1,700	1,600	-----	-----	600
WASHINGTON	- - - - -		6,000	5,600	600	300	1,300
OUTLYING AREAS	- - - - -		500	500	-----	-----	300
CANAL ZONE	- - - - -		-----	-----	-----	-----	-----
GUAM	- - - - -		-----	-----	-----	-----	-----
PUERTO RICO	- - - - -		500	500	-----	-----	300
VIRGIN ISLANDS	- - - - -		-----	-----	-----	-----	-----
FOREIGN	- - - - -		2,200	2,000	100	200	600

NOTE - GROUPS MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING. GROUPS OF CURR  
ASTRONAUTICAL), CIVIL (ARCHITECTURAL, CIVIL, CONSTRUCTION, ENV  
(COMMUNICATIONS, ELECTRICAL, ELECTRONIC), GENERAL (ENGINEERING  
ENGINEERING SCIENCE, ENGINEERING TECHNOLOGY, INDUSTRIAL, MATER  
(METALLURGICAL, WELDING), MINERAL (GEOLOGICAL, GEOPHYSICAL, MI  
BIOENGINEERING, CERAMIC, NAVAL ARCHITECTURE, NUCLEAR, TEXTILE,  
PHYSICS, OTHER NONENGINEERING).

# NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## CHARACTERISTICS OF ENGINEERS MEETING CRITERIA BY BACHELOR'S DEGREE CURRICULA GROUPS--CONTINUED

### BACHELOR'S DEGREE CURRICULA GROUPS

CHARACTERISTICS	TOTAL	TOTAL REPORT- ING BS DEGREE	AERO- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL	GENERAL	MECHAN- ICAL	METAL- LURGICAL	MINERAL	OTHER	NO REPORT OF CUR- RICULUM	NO REPORT OF BS DEGREE
CONTINUED													
- - -	11,900	11,000	400	1,100	2,300	2,300	900	2,300	300	400	900	100	800
- - -	4,000	3,800	200	400	600	1,000	300	800	100	100	300	-----	200
- - -	1,900	1,700	-----	200	400	300	100	400	100	100	200	-----	200
- - -	1,200	1,100	-----	-----	400	100	100	200	-----	100	200	-----	100
- - -	4,800	4,400	200	500	900	900	400	900	200	100	300	-----	400
- - -	29,500	27,400	1,000	4,000	3,900	4,300	1,500	5,500	200	4,900	1,900	100	2,100
- - -	900	800	-----	100	200	200	100	100	-----	100	100	-----	100
- - -	5,100	4,600	100	700	900	600	200	800	-----	900	300	-----	400
- - -	4,300	4,000	100	500	500	600	200	800	-----	1,000	300	-----	300
- - -	19,200	18,000	800	2,600	2,400	3,000	1,100	3,800	200	2,900	1,200	100	1,200
- - -	14,800	13,200	300	800	2,800	2,600	600	2,200	600	2,200	1,000	100	1,600
- - -	3,100	2,700	-----	100	400	800	100	500	100	400	200	-----	400
- - -	4,800	4,300	200	300	1,000	800	200	700	100	600	300	-----	600
- - -	900	900	-----	100	200	200	-----	100	-----	100	100	-----	-----
- - -	800	800	-----	100	200	100	-----	100	-----	200	-----	-----	100
- - -	900	800	-----	-----	200	100	-----	100	100	200	100	-----	100
- - -	2,000	1,800	100	100	300	400	100	400	100	200	100	-----	200
- - -	1,600	1,500	-----	100	300	200	100	200	100	300	100	-----	200
- - -	500	400	-----	-----	100	-----	-----	100	-----	200	-----	-----	100
- - -	50,700	46,400	3,800	2,800	9,200	10,400	4,000	9,600	900	1,900	3,600	200	4,300
- - -	600	500	-----	-----	200	-----	-----	-----	-----	200	-----	-----	-----
- - -	41,400	37,700	3,100	2,400	6,700	8,900	3,400	7,900	700	1,500	3,000	200	3,700
- - -	1,000	900	-----	-----	400	100	100	100	-----	-----	100	-----	-----
- - -	1,700	1,600	-----	-----	600	400	100	300	-----	-----	100	-----	100
- - -	6,000	5,600	600	300	1,300	900	400	1,300	100	200	400	-----	400
- - -	500	500	-----	-----	300	-----	-----	100	-----	-----	-----	-----	-----
- - -	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
- - -	500	500	-----	-----	300	-----	-----	100	-----	-----	-----	-----	-----
- - -	2,200	2,000	100	200	600	200	100	300	100	200	200	-----	200

ADD TO TOTAL BECAUSE OF ROUNDING. GROUPS OF CURRICULA ARE DEFINED AS AEROSPACE (AERONAUTICAL AND CIVIL (ARCHITECTURAL, CIVIL, CONSTRUCTION, ENVIRONMENTAL, SANITARY, TRANSPORTATION), ELECTRICAL (ELECTRICAL, ELECTRONIC), GENERAL (ENGINEERING MECHANICS, ENGINEERING GENERAL, ENGINEERING PHYSICS, ENGINEERING TECHNOLOGY, INDUSTRIAL, MATERIALS), MECHANICAL (MARINE, MECHANICAL), METALLURGICAL (WELDING), MINERAL (GEOLOGICAL, GEOPHYSICAL, MINERAL, MINING, PETROLEUM), OTHER (AGRICULTURAL, CIVIL ENGINEERING, NAVAL ARCHITECTURE, NUCLEAR, TEXTILE, OTHER ENGINEERING, BUSINESS ADMINISTRATION, CHEMISTRY, OTHER ENGINEERING).

NATIONAL REGISTER OF SCIENTIFIC A  
NUMBER OF ENGINEERS MEETING CRITERIA B

FUNCTIONS	TOTAL	PRIVATE INDUSTRY OR BUSINESS	SELF- EM- PLOYED	COLLEGE OR UNIV.	JR. COL. OR TECH. INST.
ALL FUNCTIONS - - - - -	308,000	211,100	11,400	20,200	900
ADVISING, CONSULTATION - -	32,700	20,300	4,700	600	-----
CONSTRUCTION, INSTALLATION	10,800	7,000	600	100	-----
COORDINATION, LIAISON - -	7,900	5,400	100	100	-----
COST EST., BUDGET, PURCHASE	5,300	4,200	100	100	-----
DESIGN - - - - -	53,000	40,600	2,300	600	-----
DEVELOPMENT - - - - -	26,100	21,800	200	400	-----
DRAFTING, DRAWING, GRAPHICS	600	300	-----	100	-----
EXPLORATION - - - - -	2,200	1,600	200	-----	-----
INFORMATION, DATA PROCESSING	3,500	2,300	100	100	-----
PLANNING, DIRECTING - - -	59,100	42,800	1,100	1,500	100
PRODUCTION, OPERATIONS - -	21,000	17,800	300	100	-----
QUALITY ASSURANCE, CONTROL	4,800	4,000	-----	-----	-----
RESEARCH - - - - -	22,900	12,200	100	3,600	-----
SALES, TECHNICAL SERVICES -	19,200	17,300	1,300	-----	-----
SPECIFYING - - - - -	1,500	1,100	-----	-----	-----
TEACHING, INSTRUCTING - - -	15,300	800	100	12,200	700
TESTING, EVALUATION - - -	6,900	4,600	-----	100	-----
FULL-TIME STUD., NO PROFILE	500	-----	-----	100	-----
RETIRED, NO PROFILE - - -	3,100	-----	-----	-----	-----
OTHER - - - - -	6,500	4,500	100	200	-----
NO REPORT - - - - -	4,900	2,400	300	300	-----

NOTE - GROUPS MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## NUMBER OF ENGINEERS MEETING CRITERIA BY FUNCTIONS AND TYPES OF EMPLOYER

## TYPES OF EMPLOYER

TOTAL	PRIVATE INDUSTRY OR BUSINESS	SELF- EM- PLOYED	COLLEGE OR UNIV.	JR. COL. OR TECH. INST.	SEC., ELEM., OTHER SCHOOL	NON- PROFIT ORG., OTHER THAN A SCHOOL	FEDERAL GOVT. CIVILIAN EMPLOYEE	USPHS, MILI- TARY SERVICE	STATE GOVT.	LOCAL GOVT.	OTHER	NO REPORT
308,000	211,100	11,400	20,200	900	300	5,400	24,600	4,900	5,900	4,800	4,600	14,000
32,700	20,300	4,700	600	-----	-----	1,000	2,300	300	600	300	700	1,900
10,800	7,000	600	100	-----	-----	-----	800	300	800	300	300	400
7,900	5,400	100	100	-----	-----	100	1,000	400	300	200	200	200
5,300	4,200	100	100	-----	-----	-----	400	100	100	100	100	200
53,000	40,600	2,300	600	-----	-----	300	4,100	200	1,400	1,200	800	1,400
26,100	21,800	200	400	-----	-----	500	2,000	300	100	100	200	500
600	300	-----	100	-----	-----	-----	-----	-----	-----	-----	-----	100
2,200	1,600	200	-----	-----	-----	-----	200	-----	-----	-----	-----	100
3,500	2,300	100	100	-----	-----	200	500	100	100	100	100	100
59,100	42,800	1,100	1,500	100	-----	1,200	5,500	1,400	1,400	1,700	900	1,500
21,000	17,800	300	100	-----	-----	100	1,000	400	200	200	300	500
4,800	4,000	-----	-----	-----	-----	100	400	100	100	100	-----	100
22,900	12,200	100	3,600	-----	-----	1,400	4,000	200	200	-----	300	800
19,200	17,300	1,300	-----	-----	-----	-----	-----	-----	-----	-----	300	300
1,500	1,100	-----	-----	-----	-----	-----	200	-----	-----	-----	-----	-----
15,300	800	100	12,200	700	200	100	200	400	100	-----	-----	600
6,900	4,600	-----	100	-----	-----	100	1,000	300	300	200	100	100
500	-----	-----	100	-----	-----	-----	-----	-----	-----	-----	-----	400
3,100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	3,100
6,500	4,500	100	200	-----	-----	200	700	300	100	100	100	300
4,900	2,400	300	300	-----	-----	100	200	100	100	100	100	1,300

TOTAL BECAUSE OF ROUNDING.

NATIONAL REGISTER OF SCIENTIFIC  
NUMBER OF ENGINEERS MEETING CRITERIA B

FUNCTIONS	TOTAL	BIOMEDICAL	BEHAVIORAL AND SOCIAL	CH M-
ALL FUNCTIONS - - - - -	308,000	1,600	4,100	
ADVISING, CONSULTATION - -	32,700	200	600	
CONSTRUCTION, INSTALLATION	10,800	-----	-----	
COORDINATION, LIAISON - - -	7,900	-----	100	
COST EST., BUDGET, PURCHASE	5,300	-----	200	
DESIGN - - - - -	53,000	100	100	
DEVELOPMENT - - - - -	26,100	100	100	
DRAFTING, DRAWING, GRAPHICS	600	-----	-----	
EXPLORATION - - - - -	2,200	-----	-----	
INFORMATION, DATA PROCESSING	3,500	-----	100	
PLANNING, DIRECTING - - -	59,100	300	1,000	
PRODUCTION, OPERATIONS - -	21,000	-----	-----	
QUALITY ASSURANCE, CONTROL	4,800	-----	-----	
RESEARCH - - - - -	22,900	500	100	
SALES, TECHNICAL SERVICES -	19,200	-----	100	
SPECIFYING - - - - -	1,500	-----	-----	
TEACHING, INSTRUCTING - - -	15,300	200	1,400	
TESTING, EVALUATION - - -	6,900	-----	-----	
FULL-TIME STUD., NO PROFILE	500	-----	-----	
RETIRED, NO PROFILE - - -	3,100	-----	-----	
OTHER - - - - -	6,500	-----	100	
NO REPORT - - - - -	4,900	-----	-----	

# NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## NUMBER OF ENGINEERS MEETING CRITERIA BY FUNCTIONS AND AREAS OF TECHNOLOGY

TOTAL	AREAS OF TECHNOLOGY							
	BIOMEDICAL	BEHAVIORAL AND SOCIAL	CHEMICAL AND MATERIALS	METALLUR- GICAL	EARTH, ATMOSPHERIC AND MARINE	ENVIRON- MENTAL AND STRUCTURAL	ELECTRO- MAGNETIC	DYNAMICS AND MECHANICS
308,000	1,600	4,100	11,700	12,100	9,900	33,700	42,800	40,100
32,700	200	600	1,200	900	1,500	4,500	3,900	3,200
10,800	-----	-----	200	-----	200	2,900	1,500	1,200
7,900	-----	100	200	100	200	800	900	700
5,300	-----	200	100	100	100	400	500	300
53,000	100	100	900	200	700	9,500	9,900	9,700
26,100	100	100	1,700	1,400	400	1,000	4,700	4,300
600	-----	-----	-----	-----	-----	100	-----	-----
2,200	-----	-----	-----	-----	1,400	100	100	100
3,500	-----	100	100	100	200	300	300	200
59,100	300	1,000	1,500	1,600	2,200	6,200	9,100	5,900
21,000	-----	-----	900	1,300	900	800	2,300	1,900
4,800	-----	-----	200	900	-----	200	300	100
22,900	500	100	1,900	3,000	900	1,900	1,800	4,600
19,200	-----	100	1,700	1,000	400	1,900	3,700	2,800
1,500	-----	-----	100	100	-----	100	200	200
15,300	200	1,400	600	700	400	2,000	1,300	3,500
6,900	-----	-----	300	500	100	600	700	600
500	-----	-----	-----	-----	-----	-----	-----	-----
3,100	-----	-----	-----	-----	-----	-----	-----	-----
6,500	-----	100	200	100	100	600	900	500
4,900	-----	-----	100	100	100	200	200	200



NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL  
NUMBER OF ENGINEERS MEETING CRITERIA BY FUNCTIONS AND AREAS OF TECHNICAL SPECIALIZATION

FUNCTIONS	AREAS OF TECHNICAL SPECIALIZATION				
	HEAT, LIGHT AND APPLIED PHYSICS	NUCLEAR	ENGINEERING PROCESSES AND APPLICATIONS	AUTOMATION AND CONTROL	WATER MANAGEMENT EVALUATION
ALL FUNCTIONS - - - - -	8,500	2,600	32,100	12,400	56,000
ADVISING, CONSULTATION - -	700	200	4,000	700	6,000
CONSTRUCTION, INSTALLATION	100	100	1,900	300	1,000
COORDINATION, LIAISON - - -	100	100	1,100	300	2,000
COST EST., BUDGET, PURCHASE	100	-----	500	100	2,000
DESIGN - - - - -	1,300	500	6,800	2,500	6,000
DEVELOPMENT - - - - -	1,300	400	2,800	1,600	3,000
DRAFTING, DRAWING, GRAPHICS	-----	-----	-----	-----	-----
EXPLORATION - - - - -	100	-----	200	-----	-----
INFORMATION, DATA PROCESSING	100	-----	200	100	-----
PLANNING, DIRECTING - - - -	1,100	500	7,300	1,900	14,000
PRODUCTION, OPERATIONS - -	200	200	2,400	600	7,000
QUALITY ASSURANCE, CONTROL	100	-----	200	100	2,000
RESEARCH - - - - -	1,600	200	1,300	800	1,000
SALES, TECHNICAL SERVICES -	800	100	1,200	2,000	1,000
SPECIFYING - - - - -	-----	-----	100	100	1,000
TEACHING, INSTRUCTING - - -	800	200	1,000	400	1,000
TESTING, EVALUATION - - - -	100	100	400	500	2,000
FULL-TIME STUD., NO PROFILE	-----	-----	-----	-----	-----
RETIRED, NO PROFILE - - - -	-----	-----	-----	-----	-----
OTHER - - - - -	100	100	700	200	1,000
NO REPORT - - - - -	100	-----	100	100	-----

NOTE - GROUPS MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## OF ENGINEERS MEETING CRITERIA BY FUNCTIONS AND AREAS OF TECHNOLOGY--CONTINUED

HEAT, LIGHT AND APPLIED PHYSICS	AREAS OF TECHNOLOGY						NO REPORT
	NUCLEAR	ENGINEERING PROCESSES AND APPLICATIONS	AUTOMATION AND CONTROL	WORK MANAGE- MENT AND EVALUATION	INFORMATION AND MATHEMATICS	OTHER	
8,500	2,600	32,100	12,400	56,500	11,500	9,700	18,700
700	200	4,000	700	6,200	1,200	1,200	2,300
100	100	1,900	300	1,500	100	400	600
100	100	1,100	300	2,300	200	300	300
100	-----	500	100	2,400	100	300	200
1,300	500	6,800	2,500	6,000	2,300	600	1,900
1,300	400	2,800	1,600	3,700	1,300	600	700
-----	-----	-----	-----	100	200	-----	100
100	-----	200	-----	100	-----	-----	200
100	-----	200	100	600	1,100	200	100
1,100	500	7,300	1,900	14,500	1,300	2,400	2,000
200	200	2,400	600	7,900	200	400	600
100	-----	200	100	2,400	100	100	100
1,600	200	1,300	800	1,700	900	700	1,100
800	100	1,200	2,000	1,400	600	900	600
-----	-----	100	100	600	-----	-----	-----
800	200	1,000	400	1,000	900	400	700
100	100	400	500	2,500	200	100	200
-----	-----	-----	-----	-----	-----	-----	500
-----	-----	-----	-----	-----	-----	-----	3,100
100	100	700	200	1,200	200	1,000	400
100	-----	100	100	300	100	100	3,200

TOTAL BECAUSE OF ROUNDING.

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY FUNCTIONS AND

FUNCTIONS	TOTAL			
		AGRICUL- TURE & FOOD	AIRCRAFT & SPACE	CERAMICS
ALL FUNCTIONS - - - - -	308,000	4,000	33,000	2,100
ADVISING, CONSULTATION - - - - -	32,700	400	2,700	200
CONSTRUCTION, INSTALLATION - - - - -	10,800	100	100	-----
COORDINATION, LIAISON - - - - -	7,900	100	1,000	-----
COST EST., BUDGET, PURCHASE - - - - -	5,300	100	200	-----
DESIGN - - - - -	53,000	400	6,000	100
DEVELOPMENT - - - - -	26,100	300	5,000	300
DRAFTING, DRAWING, GRAPHICS - - - - -	600	-----	-----	-----
EXPLORATION - - - - -	2,200	-----	100	-----
INFORMATION, DATA PROCESSING - - - - -	3,500	-----	300	-----
PLANNING, DIRECTING - - - - -	59,100	800	6,800	400
PRODUCTION, OPERATIONS - - - - -	21,000	500	900	300
QUALITY ASSURANCE, CONTROL - - - - -	4,80	-----	700	100
RESEARCH - - - - -	22,900	800	4,600	300
SALES, TECHNICAL SERVICES - - - - -	19,200	100	600	200
SPECIFYING - - - - -	1,500	-----	200	-----
TEACHING, INSTRUCTING - - - - -	15,300	200	600	100
TESTING, EVALUATION - - - - -	6,900	-----	1,600	-----
FULL-TIME STUD., NO PROFILE - - - - -	500	-----	-----	-----
RETIRED, NO PROFILE - - - - -	3,100	-----	-----	-----
OTHER - - - - -	6,500	100	1,100	-----
NO REPORT - - - - -	4,900	100	300	-----

# NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## NUMBER OF ENGINEERS MEETING CRITERIA BY FUNCTIONS AND PRODUCTS OR SERVICES

		PRODUCTS OR SERVICES								
TOTAL		AGRICUL- TURE & FOOD	AIRCRAFT & SPACE	CERAMICS	CHEMICALS & ALLIED PRODUCTS	COMMU- NICATIONS	COMPUTERS	CONSTRUC- TION & CIVIL ENGR	EDUCA- TIONAL, INFOR- MATION SERVICES	
-	-	308,000	4,000	33,000	2,100	19,500	7,700	11,000	45,900	14,600
-	-	32,700	400	2,700	200	1,600	800	1,100	6,700	500
-	-	10,800	100	100	-----	300	100	100	6,300	-----
-	-	7,900	100	1,000	-----	500	300	300	1,700	100
E	-	5,300	100	200	-----	600	200	100	1,300	-----
-	-	53,000	400	6,000	100	2,700	1,200	2,000	13,100	100
-	-	26,100	300	5,000	300	3,000	900	1,500	700	100
S	-	600	-----	-----	-----	-----	-----	100	100	-----
-	-	2,200	-----	100	-----	-----	-----	100	-----	-----
G	-	3,500	-----	300	-----	100	100	900	400	300
-	-	59,100	800	6,800	400	3,500	2,100	2,200	9,100	1,300
-	-	21,000	500	900	300	3,000	600	400	900	100
-	-	4,800	-----	700	100	200	200	200	200	-----
-	-	22,900	800	4,600	300	1,600	400	600	1,500	800
-	-	17,200	100	600	200	1,100	200	800	900	-----
-	-	1,500	-----	200	-----	100	100	100	200	-----
-	-	15,300	200	600	100	200	100	200	800	10,800
-	-	6,900	-----	1,600	-----	200	100	200	600	-----
E	-	500	-----	-----	-----	-----	-----	-----	-----	-----
-	-	3,100	-----	-----	-----	-----	-----	-----	-----	-----
-	-	6,500	100	1,100	-----	500	200	300	600	200
-	-	4,900	100	300	-----	200	100	100	500	100

**NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY FUNCTIONS AND PROFESSIONS**

FUNCTIONS	PROFESSIONS			
	ELEC- TRICAL EQUIP- MENT, SERVICES	ELEC- TRONIC EQUIP- MENT, SERVICES	LAB., SCI., PHOTO., OPTICAL EQUIPMENT	MACH MECH EQU
ALL FUNCTIONS - - - - -	19,200	23,000	2,800	28
ADVISING, CONSULTATION - - - - -	2,000	1,600	200	2
CONSTRUCTION, INSTALLATION - - - - -	700	200	-----	-----
COORDINATION, LIAISON - - - - -	400	600	-----	-----
COST EST., BUDGET, PURCHASE - - - - -	200	300	-----	-----
DESIGN - - - - -	4,400	4,700	400	6
DEVELOPMENT - - - - -	1,600	4,100	400	2
DRAFTING, DRAWING, GRAPHICS - - - - -	-----	-----	-----	-----
EXPLORATION - - - - -	-----	-----	-----	-----
INFORMATION, DATA PROCESSING - - - - -	100	200	-----	-----
PLANNING, DIRECTING - - - - -	3,300	4,700	600	4
PRODUCTION, OPERATIONS - - - - -	1,300	1,000	100	1
QUALITY ASSURANCE, CONTROL - - - - -	300	600	100	-----
RESEARCH - - - - -	700	1,700	400	1
SALES, TECHNICAL SERVICES - - - - -	2,900	1,500	400	5
SPECIFYING - - - - -	100	200	-----	-----
TEACHING, INSTRUCTING - - - - -	100	200	-----	-----
TESTING, EVALUATION - - - - -	500	600	100	-----
FULL-TIME STUD., NO PROFILE - - - - -	-----	-----	-----	-----
RETIRED, NO PROFILE - - - - -	-----	-----	-----	-----
OTHER - - - - -	400	500	-----	-----
NO REPORT - - - - -	300	200	-----	-----

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

NUMBER OF ENGINEERS MEETING CRITERIA BY FUNCTIONS AND PRODUCTS OR SERVICES--CONTINUED

## PRODUCTS OR SERVICES

	ELEC- TRICAL EQUIP- MENT, SERVICES	ELEC- TRONIC EQUIP- MENT, SERVICES	LAB.,SCI., PHOTO., OPTICAL EQUIPMENT	MACHINERY, MECHANICAL EQUIPMENT	MARINE TRANS- PORTATION	MEDICAL, HEALTH SERVICES	METALS, BASIC (EXCEPT MINING)	METAL FABRICATED PRODUCTS	MINING
- - - - -	19,200	23,000	2,800	28,400	4,800	1,300	12,600	6,300	5,900
- - - - -	2,000	1,600	200	2,900	400	200	1,000	500	800
- - - - -	700	200	-----	900	100	-----	100	100	100
- - - - -	400	600	-----	500	200	-----	200	100	100
- - - - -	200	300	-----	400	100	-----	200	100	100
- - - - -	4,400	4,700	400	6,900	1,300	200	600	900	300
- - - - -	1,600	4,100	400	2,300	300	100	1,100	600	200
- - - - -	-----	-----	-----	100	-----	-----	-----	-----	-----
- - - - -	-----	-----	-----	-----	-----	-----	100	-----	900
- - - - -	100	200	-----	100	-----	-----	100	100	-----
- - - - -	3,300	4,700	600	4,600	1,100	300	2,000	1,500	1,300
- - - - -	1,300	1,000	100	1,600	300	100	1,600	600	900
- - - - -	300	600	100	200	100	-----	900	100	100
- - - - -	700	1,700	400	1,100	300	200	2,800	400	500
- - - - -	2,900	1,500	400	5,100	100	-----	1,100	800	200
- - - - -	100	200	-----	200	-----	-----	-----	-----	-----
- - - - -	100	200	-----	300	100	100	300	-----	100
- - - - -	500	600	100	500	100	-----	400	100	100
- - - - -	-----	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	400	500	-----	400	100	-----	100	100	100
- - - - -	300	200	-----	300	-----	-----	200	100	100

NATIONAL REGISTER OF SC  
NUMBER OF ENGINEERS MEETING CRITERIA

FUNCTIONS		MOTOR VEHICLE TRANS- PORTATION	ORD
ALL FUNCTIONS	- - - - -	2,500	5
ADVISING, CONSULTATION	- - - - -	200	
CONSTRUCTION, INSTALLATION	- - - - -	-----	---
COORDINATION, LIAISON	- - - - -	100	
COST EST., BUDGET, PURCHASE	- - - - -	-----	
DESIGN	- - - - -	300	
DEVELOPMENT	- - - - -	400	
DRAFTING, DRAWING, GRAPHICS	- - - - -	-----	---
EXPLORATION	- - - - -	-----	
INFORMATION, DATA PROCESSING	- - - - -	-----	
PLANNING, DIRECTING	- - - - -	500	1
PRODUCTION, OPERATIONS	- - - - -	200	
QUALITY ASSURANCE, CONTROL	- - - - -	100	
RESEARCH	- - - - -	200	
SALES, TECHNICAL SERVICES	- - - - -	100	
SPECIFYING	- - - - -	-----	---
TEACHING, INSTRUCTING	- - - - -	100	---
TESTING, EVALUATION	- - - - -	200	
FULL-TIME STUD., NO PROFILE	- - - - -	-----	---
RETIRED, NO PROFILE	- - - - -	-----	---
OTHER	- - - - -	100	
NO REPORT	- - - - -	-----	---

NOTE - GROUPS MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.

# NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## NUMBER OF ENGINEERS MEETING CRITERIA BY FUNCTIONS AND PRODUCTS OR SERVICES--CONTINUED

FUNCTIONS	PRODUCTS OR SERVICES						
	MOTOR VEHICLE TRANS- PORTATION	ORDNANCE	PETROLEUM	RAILWAY, RAPID TRANSIT	UTILITIES	OTHER PRODUCTS, SERVICES	NO REPORT OF PRODUCTS OR SERVICES
- - - - -	2,500	5,200	15,500	1,500	14,700	11,300	15,200
TATION - - - - -	200	300	2,600	200	1,300	2,600	2,000
STALLATION - - - - -	-----	-----	300	-----	700	100	400
AIISON - - - - -	100	200	500	100	400	300	200
T, PURCHASE - - - - -	-----	100	400	-----	300	300	200
- - - - -	300	700	1,300	300	2,600	700	1,600
- - - - -	400	900	800	100	400	600	600
G, GRAPHICS - - - - -	-----	-----	-----	-----	-----	-----	-----
- - - - -	-----	-----	600	-----	-----	-----	200
PROCESSING - - - - -	-----	100	100	-----	100	200	100
ING - - - - -	500	1,200	3,400	400	4,100	2,500	1,600
ATIONS - - - - -	200	300	2,700	100	2,200	900	500
E, CONTROL - - - - -	100	300	-----	-----	200	100	100
- - - - -	200	400	1,000	-----	300	900	1,000
SERVICES - - - - -	100	100	900	-----	1,100	500	300
- - - - -	-----	-----	-----	-----	100	100	100
CTING - - - - -	100	-----	100	-----	100	200	700
ION - - - - -	200	300	200	-----	300	400	200
NO PROFILE - - - - -	-----	-----	-----	-----	-----	-----	500
ILE - - - - -	-----	-----	-----	-----	-----	-----	3,100
- - - - -	100	200	400	-----	400	600	300
- - - - -	-----	-----	300	-----	100	200	1,500

Y NOT ADD TO TOTAL BECAUSE OF ROUNDING.



NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY FUNCTIONS AND HIGHEST DEGREE

FUNCTIONS	TOTAL	HIGHEST DEGREE				
		AERC- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL	GEN- ERAL
ALL FUNCTIONS - - - - -	308,000	13,100	26,600	48,600	65,500	26,100
ADVISING, CONSULTATION - - - - -	32,700	1,000	2,200	6,300	5,600	3,600
CONSTRUCTION, INSTALLATION - - - - -	10,800	200	200	5,100	1,600	1,800
COORDINATION, LIAISON - - - - -	7,900	400	600	1,800	1,400	1,100
COST EST., BUDGET, PURCHASE - - - - -	5,300	100	400	1,100	800	1,900
DESIGN - - - - -	53,000	2,000	2,900	12,400	13,900	2,800
DEVELOPMENT - - - - -	26,100	1,700	3,900	1,100	7,400	1,900
DRAFTING, DRAWING, GRAPHICS - - - - -	600	-----	-----	200	100	-----
EXPLORATION - - - - -	2,200	100	100	100	100	-----
INFORMATION, DATA PROCESSING - - - - -	3,500	100	300	500	800	-----
PLANNING, DIRECTING - - - - -	59,100	2,400	4,800	8,800	14,000	5,100
PRODUCTION, OPERATIONS - - - - -	21,000	400	3,000	1,400	4,300	2,800
QUALITY ASSURANCE, CONTROL - - - - -	4,800	200	400	300	1,100	1,800
RESEARCH - - - - -	22,900	2,100	3,000	1,900	3,000	2,800
SALES, TECHNICAL SERVICES - - - - -	19,200	500	1,700	1,500	4,300	1,800
SPECIFYING - - - - -	1,500	100	100	100	400	-----
TEACHING, INSTRUCTING - - - - -	15,300	700	1,300	2,800	1,900	2,800
TESTING, EVALUATION - - - - -	6,900	600	400	800	1,800	-----
FULL-TIME STUD., NO PROFILE - - - - -	500	-----	100	100	-----	-----
RETIRED, NO PROFILE - - - - -	3,100	-----	100	800	500	-----
OTHER - - - - -	6,500	400	500	700	1,500	-----
NO REPORT - - - - -	4,900	200	500	800	1,100	-----

NOTE - GROUPS MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING. GROUPS OF CURRICULA ARE DEFINED AS: AEROSPACE (AERONAUTICAL, ASTRONAUTICAL), CIVIL (ARCHITECTURAL, CIVIL, CONSTRUCTION, ENVIRONMENTAL, SANITARY, COMMUNICATIONS, ELECTRICAL, ELECTRONIC), GENERAL (ENGINEERING MECHANICS, ENGINEERING SCIENCE, ENGINEERING TECHNOLOGY, INDUSTRIAL, MATERIALS), MECHANICAL (METALLURGICAL, WELDING), MINERAL (GEOLOGICAL, GEOPHYSICAL, MINERAL, MINING, BIOMECHANICAL, CERAMIC, NAVAL ARCHITECTURE, NUCLEAR, TEXTILE, OTHER ENGINEERING), PHYSICS, OTHER NONENGINEERING).

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## NUMBER OF ENGINEERS MEETING CRITERIA BY FUNCTIONS AND HIGHEST DEGREE CURRICULA GROUPS

## HIGHEST DEGREE CURRICULA GROUPS

	TOTAL	AEROSPACE	CHEMICAL	CIVIL	ELECTRICAL	GENERAL	MECHANICAL	METALLURGICAL	MINERAL	OTHER	NO REPORT OF CURRICULUM
- - - - -	308,000	13,100	26,600	48,600	65,500	26,300	58,500	12,800	15,400	34,300	6,800
- - - - -	32,700	1,000	2,200	6,300	5,600	3,100	5,300	1,200	2,800	4,000	1,200
ON - - -	10,800	200	200	5,100	1,600	400	1,900	-----	200	700	400
- - - - -	7,900	400	600	1,800	1,400	700	1,400	200	200	1,100	100
BASE - - -	5,300	100	400	1,100	800	700	900	100	300	700	100
- - - - -	53,000	2,000	2,900	12,400	13,900	2,900	12,500	300	500	4,200	1,400
- - - - -	26,100	1,700	3,900	1,100	7,400	1,900	5,300	1,600	500	2,600	200
ICS - - -	600	-----	-----	200	100	-----	100	-----	-----	100	-----
- - - - -	2,200	100	100	100	100	-----	100	-----	1,500	100	-----
ING - - -	3,500	100	300	500	800	400	500	100	200	600	-----
- - - - -	59,100	2,400	4,800	8,800	14,000	5,400	10,200	1,500	3,100	7,500	1,300
- - - - -	21,000	400	3,000	1,400	4,300	2,000	4,100	1,100	2,400	2,000	500
ROL - - -	4,800	200	400	300	1,100	400	700	900	100	600	100
- - - - -	22,900	2,100	3,000	1,900	3,000	2,400	3,100	3,100	800	3,200	100
S - - - -	19,200	500	1,700	1,500	4,300	1,800	5,300	900	900	2,000	400
- - - - -	1,500	100	100	100	400	100	400	100	-----	200	-----
- - - - -	15,300	700	1,300	2,800	1,900	2,200	2,800	700	500	2,300	100
- - - - -	6,900	600	400	800	1,800	400	1,400	500	200	700	100
FILE - - -	500	-----	100	100	-----	100	-----	100	100	-----	-----
- - - - -	3,100	-----	100	800	500	200	500	100	200	200	500
- - - - -	6,500	400	500	700	1,500	700	1,100	100	300	1,000	100
- - - - -	4,900	200	500	800	1,100	300	900	200	400	500	100

AD TO TOTAL BECAUSE OF ROUNDING. GROUPS OF CURRICULA ARE DEFINED AS AEROSPACE (AERONAUTICAL AND CIVIL (ARCHITECTURAL, CIVIL, CONSTRUCTION, ENVIRONMENTAL, SANITARY, TRANSPORTATION), ELECTRICAL (ELECTRICAL, ELECTRONIC), GENERAL (ENGINEERING MECHANICS, ENGINEERING GENERAL, ENGINEERING PHYSICS, CE, ENGINEERING TECHNOLOGY, INDUSTRIAL, MATERIALS), MECHANICAL (MARINE, MECHANICAL), METALLURGICAL (WELDING), MINERAL (GEOLOGICAL, GEOPHYSICAL, MINERAL, MINING, PETROLEUM), OTHER (AGRICULTURAL, CERAMIC, NAVAL ARCHITECTURE, NUCLEAR, TEXTILE, OTHER ENGINEERING, BUSINESS ADMINISTRATION, CHEMISTRY, ENGINEERING).

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY

AREAS OF TECHNOLOGY	TOTAL	PRIVATE INDUSTRY OR BUSINESS	SELF- EMPLOYED	COLLEGE OR UNIV.	JR.COL. OR TECH. INST.	SEC., ELEM., OTHER SCHOOL	P
ALL AREAS OF TECHNOLOGY	308,000	211,100	11,400	20,200	900	300	
BIOMEDICAL - - - - -	1,700	600	100	500	-----	-----	
AQUACULTURE - - - - -	-----	-----	-----	-----	-----	-----	
BIOCHEMISTRY - - - - -	100	-----	-----	-----	-----	-----	
BIOENGINEERING - - - - -	700	200	-----	300	-----	-----	
BIOLOGICAL APPLICATIONS - -	100	-----	-----	100	-----	-----	
BIOMECHANICS - - - - -	100	-----	-----	100	-----	-----	
BIONICS, MEDICAL ELECTRONICS	100	100	-----	-----	-----	-----	
HEALTH PHYSICS - - - - -	-----	-----	-----	-----	-----	-----	
INDUSTRIAL HEALTH - - - - -	100	-----	-----	-----	-----	-----	
LIFE SUPPORT - - - - -	100	100	-----	-----	-----	-----	
MEDICAL APPLICATIONS - - -	200	100	-----	-----	-----	-----	
PHYSIOLOGY - - - - -	-----	-----	-----	-----	-----	-----	
PUBLIC HEALTH - - - - -	200	-----	-----	-----	-----	-----	
BEHAVIORAL AND SOCIAL -	4,300	2,000	100	1,300	300	100	
ECONOMICS - - - - -	1,900	1,500	-----	100	-----	-----	
EDUCATIONAL TECHNOLOGY - -	2,000	200	-----	1,100	300	100	
HISTORY (TECHNOLOGICAL) - -	100	-----	-----	-----	-----	-----	
HUMAN FACTORS - - - - -	300	200	-----	-----	-----	-----	
PSYCHOLOGY - - - - -	-----	-----	-----	-----	-----	-----	
CHEMICAL AND MATERIALS -	12,400	9,300	300	1,000	-----	-----	
CHEMICAL APPLICATIONS - - -	4,800	3,900	100	300	-----	-----	
COMBUSTION, FUELS - - - -	1,000	700	-----	100	-----	-----	
COATING, PLATING, CLADDING	400	300	-----	-----	-----	-----	
CORROSION - - - - -	400	300	-----	-----	-----	-----	
CRYSTALS, CRYSTALLOGRAPHY -	100	100	-----	-----	-----	-----	
ELECTROCHEMISTRY - - - - -	300	300	-----	-----	-----	-----	
FILAMENT TECHNOLOGY - - - -	200	200	-----	-----	-----	-----	
FUEL CELLS - - - - -	100	100	-----	-----	-----	-----	
MATERIAL APPLICATIONS - - -	3,600	2,800	100	100	-----	-----	
MATERIAL PROPERTIES - - - -	1,400	700	-----	400	-----	-----	
THERMOCHEMISTRY - - - - -	100	-----	-----	-----	-----	-----	
METALLURGICAL - - - - -	12,900	9,800	200	1,100	-----	-----	
BENEFICIATION, ORE PROCESS.	600	500	-----	-----	-----	-----	
CASTING - - - - -	400	400	-----	-----	-----	-----	
METALLURGY (GENERAL) - - -	4,300	3,200	100	300	-----	-----	
METALLURGY, EXTRACTIVE - - -	1,200	900	100	100	-----	-----	
METALLURGY, PHYSICAL - - -	3,000	1,900	-----	600	-----	-----	
METALLURGY, POWDER - - - -	400	300	-----	-----	-----	-----	
METALLURGY, PROCESS - - - -	2,300	2,000	-----	100	-----	-----	
HEATING - - - - -	400	500	-----	-----	-----	-----	

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NUMBER OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND TYPES OF EMPLOYER

## TYPES OF EMPLOYER

TOTAL	PRIVATE INDUSTRY OR BUSINESS	SELF- EM- PLOYED	COLLEGE OR UNIV.	JR.COL. OR TECH. INST.	SEC., ELEM., OTHER SCHOOL	NON- PROFIT ORG., OTHER THAN A SCHOOL	FEDERAL GOVT. CIVILIAN EMPLOYEE	USPHS, MILI- TARY SERVICE	STATE GOVT.	LOCAL GOVT.	OTHER	NO REPORT
308,000	211,100	11,400	20,200	900	300	5,400	24,600	4,900	5,900	4,800	4,600	14,000
1,700	600	100	500	-----	-----	100	200	100	-----	-----	-----	100
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
700	200	-----	300	-----	-----	100	100	-----	-----	-----	-----	100
100	-----	-----	100	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	100	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
4,300	2,000	100	1,300	300	100	100	100	100	100	-----	-----	200
1,900	1,500	-----	100	-----	-----	-----	100	-----	-----	-----	-----	-----
2,000	200	-----	1,100	300	100	-----	-----	-----	-----	-----	-----	100
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
300	200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
12,400	9,300	500	1,000	-----	-----	200	600	-----	100	-----	200	600
4,800	3,900	100	300	-----	-----	100	100	-----	-----	-----	-----	300
1,000	700	-----	100	-----	-----	-----	100	-----	-----	-----	100	100
400	300	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
400	300	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
300	300	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3,600	2,800	100	100	-----	-----	100	200	-----	-----	-----	-----	100
1,400	700	-----	400	-----	-----	100	100	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
12,900	9,800	200	1,100	-----	-----	300	600	100	-----	-----	100	800
600	500	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
400	400	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
4,300	3,200	100	300	-----	-----	100	100	-----	-----	-----	100	300
1,200	900	100	100	-----	-----	-----	100	-----	-----	-----	-----	100
3,000	1,900	-----	600	-----	-----	100	200	-----	-----	-----	-----	100
300	300	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2,000	-----	-----	100	-----	-----	-----	100	-----	-----	-----	-----	100
500	500	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY

AREAS OF TECHNOLOGY	TOTAL	PRIVATE INDUSTRY OR BUSINESS	SELF- EMPLOYED	COLLEGE OR UNIV.	JR. COL. OR TECH. INST.	SEC. ELEM. OR OTHER SCHO.
AREAS OF TECHNOLOGY, CONTINUED						
EARTH, ATMOSPHERE, MARINE	10,800	6,300	700	700	-----	-----
ATMOSPHERIC SCIENCES - - - - -	200	-----	-----	-----	-----	-----
DESALTING - - - - -	200	100	-----	-----	-----	-----
EARTH SCIENCES - - - - -	900	600	100	100	-----	-----
GEOCHEMISTRY - - - - -	100	-----	-----	-----	-----	-----
GEODESY - - - - -	100	-----	-----	-----	-----	-----
GEOLOGY - - - - -	2,700	1,600	300	200	-----	-----
GEOPHYSICS - - - - -	400	300	-----	-----	-----	-----
HYDROGRAPHY - - - - -	-----	-----	-----	-----	-----	-----
HYDROLOGY - - - - -	1,000	100	-----	100	-----	-----
MARINE SCIENCES - - - - -	900	500	-----	100	-----	-----
MINING, SURFACE - - - - -	1,300	900	100	-----	-----	-----
MINING, UNDERGROUND - - - - -	1,900	1,300	100	-----	-----	-----
MINING, UNDERWATER - - - - -	100	-----	-----	-----	-----	-----
OCEANOGRAPHY - - - - -	300	100	-----	-----	-----	-----
OFFSHORE OPERATIONS - - - - -	600	500	-----	-----	-----	-----
UNDERWATER TECHNOLOGY - - - - -	200	100	-----	-----	-----	-----
ENVIRONMENTAL, STRUCTURAL	35,900	17,000	3,000	2,700	100	-----
AIR POLLUTION - - - - -	900	500	100	100	-----	-----
CONCRETE TECHNOLOGY - - - - -	1,400	800	100	100	-----	-----
CONSERVATION, RECLAMATION - - - - -	700	100	-----	-----	-----	-----
DRAINAGE, IRRIGATION - - - - -	900	200	100	100	-----	-----
ENVIRONMENTAL CONTROL - - - - -	3,500	2,500	400	100	-----	-----
ENVIRONMENTAL FACTORS - - - - -	300	200	-----	-----	-----	-----
NOISE REDUCTION - - - - -	200	100	-----	-----	-----	-----
PHOTOGRAMMETRY - - - - -	100	100	-----	-----	-----	-----
POLLUTION - - - - -	300	200	-----	-----	-----	-----
PUBLIC SAFETY - - - - -	200	-----	-----	-----	-----	-----
ROCK MECHANICS - - - - -	200	100	-----	-----	-----	-----
SANITARY ENGINEERING - - - - -	2,900	1,300	300	300	-----	-----
SOILS - - - - -	1,600	600	100	300	-----	-----
SOLID WASTE - - - - -	100	-----	-----	-----	-----	-----
STRUCTURES - - - - -	13,300	7,000	1,300	1,000	-----	-----
SURVEYING, MAPPING - - - - -	900	300	200	100	-----	-----
TRAFFIC - - - - -	500	100	-----	-----	-----	-----
TRANSPORTATION - - - - -	3,800	1,400	100	200	-----	-----
WASTE DISPOSAL - - - - -	500	300	-----	-----	-----	-----
WATER POLLUTION - - - - -	900	400	-----	100	-----	-----
WATER RESOURCES AND SUPPLY	2,700	700	100	200	-----	-----

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## ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND TYPES OF EMPLOYER--CONTINUED

## TYPES OF EMPLOYER

TOTAL	PRIVATE INDUSTRY OR BUSINESS	SELF- EMP- LOYED	COLLEGE OR UNIV.	JR.COL. OR TECH. INST.	SFC., ELEM., OTHER SCHOOL	NON- PROFIT ORG., OTHER THAN A SCHOOL	FEDERAL GOVT. CIVILIAN EMPLOYEE	USPHS, MILI- TARY SERVICE	STATE GOVT.	LOCAL GOVT.	OTHER	NO REPORT
10,800	6,300	700	700	-----	-----	100	1,600	100	200	100	100	900
200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
900	600	100	100	-----	-----	-----	100	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2,700	1,600	300	200	-----	-----	-----	100	-----	100	-----	-----	300
400	300	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1,000	100	-----	100	-----	-----	-----	700	-----	-----	-----	-----	-----
900	500	-----	100	-----	-----	-----	100	100	-----	-----	-----	-----
1,300	900	100	-----	-----	-----	-----	100	-----	-----	-----	-----	100
1,900	1,300	100	-----	-----	-----	-----	100	-----	-----	-----	-----	200
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
300	100	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
600	500	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	100	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
35,900	17,000	3,000	2,700	100	-----	600	4,200	500	2,900	1,900	700	2,200
900	500	100	100	-----	-----	-----	100	-----	-----	100	-----	-----
1,400	800	100	100	-----	-----	100	100	-----	100	-----	-----	100
700	100	-----	-----	-----	-----	-----	500	-----	-----	-----	-----	-----
900	200	100	100	-----	-----	-----	300	-----	-----	100	-----	-----
3,500	2,500	400	100	-----	-----	-----	100	-----	100	-----	100	100
300	200	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
200	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
300	200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	-----	-----	-----	-----	-----	-----	-----	-----	-----	100	-----	-----
200	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2,900	1,300	300	300	-----	-----	-----	100	100	100	400	100	200
1,600	600	100	300	-----	-----	-----	300	100	100	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
13,300	7,000	1,300	1,000	-----	-----	200	1,000	200	700	400	200	1,300
900	300	200	100	-----	-----	-----	100	-----	100	-----	-----	-----
500	100	-----	-----	-----	-----	-----	-----	-----	200	100	-----	-----
3,800	1,400	100	200	-----	-----	100	500	-----	900	400	100	100
500	300	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
900	400	-----	100	-----	-----	-----	200	-----	100	-----	-----	-----
2,700	700	100	200	-----	-----	-----	700	-----	400	300	100	200

NATIONAL REGISTER OF SCIENTIFIC PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY AREA

AREAS OF TECHNOLOGY	TOTAL	PRIVATE INDUSTRY OR BUSINESS	SELF- EMPLOYED	COLLEGE OR UNIV.	JOINT
AREAS OF TECHNOLOGY, CONTINUED					
ELECTROMAGNETIC - - - -	44,800	34,500	1,200	1,600	-
CIRCUITS, NETWORKS - - - -	1,300	1,100	---	100	-
COMMUNICATION - - - - -	4,200	3,300	100	100	-
DIELECTRICS - - - - -	100	100	---	---	-
ELECTRICAL APPLICATIONS - -	4,300	3,400	200	100	-
ELECTRICAL ENGINEERING - -	16,200	12,000	500	1,000	-
ELECTROMAGNETIC RADIATION -	900	600	---	100	-
ELECTROMECHANICAL TECH. - -	1,500	1,300	---	---	-
ELECTRONIC APPLICATIONS - -	6,900	5,500	200	200	-
INFRA-RED, RADICMETRY - - -	200	100	---	---	-
INSULATION, ELECTRICAL - -	200	200	---	---	-
MAGNETICS, MAGNETISM - - -	400	300	---	---	-
NAVIGATION - - - - -	800	500	---	---	-
PHOTOELECTRICITY - - - - -	100	100	---	---	-
POWER, ELECTRICAL - - - - -	5,300	4,100	100	---	-
RADIO FREQ. COMPATIBILITY -	100	100	---	---	-
RECORDING - - - - -	100	100	---	---	-
SUPERCONDUCTIVITY - - - - -	---	---	---	---	-
TELECOMMUNICATIONS - - - -	2,100	1,700	---	100	-
DYNAMICS AND MECHANICS - -	42,200	27,700	1,600	4,500	-
AERODYNAMICS - - - - -	4,300	2,500	---	400	-
ASTRODYNAMICS - - - - -	700	400	---	100	-
ENERGY GEN. AND CONVERSION -	1,500	1,100	100	100	-
EXPLOSIVE EFFECTS - - - - -	200	100	---	---	-
FLUID DYNAMICS, MECHANICS -	2,500	1,300	---	700	-
FLUIDICS - - - - -	200	100	---	---	-
FRICTION - - - - -	100	---	---	---	-
GAS DYNAMICS - - - - -	500	300	---	100	-
HIGH PRESSURE - - - - -	100	100	---	---	-
HYDRAULICS - - - - -	2,200	1,000	100	100	-
HYDRODYNAMICS - - - - -	300	100	---	---	-
KINETICS - - - - -	300	100	---	100	-
LUBRICATION - - - - -	300	300	---	---	-
MAGNETOHYDRODYNAMICS - - -	100	---	---	---	-
MASS TRANSFER - - - - -	400	300	---	100	-
MECHANICAL APPLICATIONS - -	3,700	2,600	200	300	-
MECHANICAL ENGINEERING - -	19,200	13,700	1,000	1,600	-
MECHANICS - - - - -	1,400	400	---	700	-
POWER, MECHANICAL - - - - -	1,400	1,100	---	---	-
PULSION - - - - -	2,700	1,900	---	100	-
VACUUM TECHNOLOGY - - - - -	200	100	---	---	-

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OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND TYPES OF EMPLOYER--CONTINUED

## TYPES OF EMPLOYER

	TOTAL	PRIVATE INDUSTRY OR BUSINESS	SELF- EMPLOYED	COLLEGE OR UNIV.	JR. COL. OR TECH. INST.	SEC., ELEM., OTHER SCHOOL	NON- PROFIT ORG., OTHER THAN A SCHOOL	FEDERAL GOVT. CIVILIAN EMPLOYEE	USPHS, MILI- TARY SERVICE	STATE GOVT.	LOCAL GOVT.	OTHER	NO REPORT
-	44,800	34,500	1,200	1,600	100	-----	500	3,000	300	200	500	900	2,000
-	1,300	1,100	-----	100	-----	-----	-----	-----	-----	-----	-----	-----	100
-	4,200	3,300	100	100	-----	-----	100	300	-----	-----	-----	100	200
-	100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	4,300	3,400	200	100	-----	-----	-----	100	-----	-----	-----	100	300
-	16,200	12,000	500	1,000	-----	-----	100	1,100	-----	-----	300	400	800
N	900	600	-----	100	-----	-----	-----	100	-----	-----	-----	-----	-----
-	1,500	1,300	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
-	6,900	5,500	200	200	-----	-----	100	600	100	-----	-----	100	100
-	200	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	200	200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	400	300	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	800	500	-----	-----	-----	-----	-----	100	100	-----	-----	-----	-----
-	100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	5,300	4,100	100	-----	-----	-----	100	200	-----	100	200	200	300
Y	100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	2,100	1,700	-----	100	-----	-----	-----	100	-----	-----	-----	100	100
S	42,200	27,700	1,600	4,500	100	-----	800	3,900	600	200	300	500	2,000
-	4,300	2,500	-----	400	-----	-----	100	800	200	-----	-----	-----	200
-	700	400	-----	100	-----	-----	-----	100	-----	-----	-----	-----	-----
ON	1,500	1,100	100	100	-----	-----	-----	100	-----	-----	-----	-----	-----
-	200	100	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
S	2,500	1,300	-----	700	-----	-----	100	200	-----	-----	-----	-----	100
-	200	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	500	300	-----	100	-----	-----	-----	100	-----	-----	-----	-----	-----
-	100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	2,200	1,000	100	100	-----	-----	-----	600	-----	100	200	-----	100
-	300	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	300	100	-----	100	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	300	300	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	400	300	-----	100	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	3,700	2,600	200	300	-----	-----	100	200	-----	-----	-----	-----	400
-	19,200	13,700	1,000	1,600	-----	-----	100	1,100	100	100	100	300	1,000
-	1,400	400	-----	700	-----	-----	100	100	-----	-----	-----	-----	100
-	1,400	1,100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100
-	700	1,900	-----	100	-----	-----	100	400	100	-----	-----	-----	100
-	200	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----



NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND TYPES

					TYPES OF EMPLO			
AREAS OF TECHNOLOGY	TOTAL	PRIVATE INDUSTRY OR BUSINESS	SELF- EM- PLOYED	COLLEGE OR UNIV.	JR. COL. OR TECH. INST.	SEC., ELEM., OTHER SCHOOL	NON- PROFIT ORG., OTHER THAN A SCHOOL	FEDER- AL GOV- ERNMENT CIVIL EMPLOY
AREAS OF TECHNOLOGY, CONTINUED								
HEAT, LIGHT, APPL. PHYSICS	8,800	6,000	300	1,200	-----	-----	200	7
ACOUSTICS, SONICS - - - - -	600	400	-----	-----	-----	-----	-----	1
APPLIED PHYSICS - - - - -	600	400	-----	100	-----	-----	-----	1
ASTRONOMY AND ASTROPHYSICS	100	-----	-----	-----	-----	-----	-----	-----
CRYOGENICS - - - - -	500	400	-----	-----	-----	-----	-----	-----
HEAT TRANSFER - - - - -	2,800	2,100	100	400	-----	-----	100	1
HIGH TEMPERATURE - - - - -	100	100	-----	-----	-----	-----	-----	-----
HOLOGRAPHY - - - - -	-----	-----	-----	-----	-----	-----	-----	-----
ILLUMINATION, LIGHTING - - -	300	200	100	-----	-----	-----	-----	-----
INSULATION, THERMAL - - - - -	100	100	-----	-----	-----	-----	-----	-----
OPTICS - - - - -	300	300	-----	-----	-----	-----	-----	-----
PHOTOGRAPHY - - - - -	300	200	-----	-----	-----	-----	-----	-----
PHYSICS - - - - -	500	200	-----	100	-----	-----	-----	-----
PLASMAS - - - - -	200	100	-----	-----	-----	-----	-----	-----
RADIO ASTRONOMY - - - - -	-----	-----	-----	-----	-----	-----	-----	-----
SOLID STATE - - - - -	500	400	-----	100	-----	-----	-----	-----
THERMODYNAMICS - - - - -	1,300	800	-----	300	-----	-----	-----	-----
THERMOPHYSICS - - - - -	100	100	-----	-----	-----	-----	-----	-----
ULTRASONICS - - - - -	100	-----	-----	-----	-----	-----	-----	-----
UNDERWATER ACOUSTICS - - - -	200	100	-----	-----	-----	-----	-----	1
NUCLEAR - - - - -	2,600	1,700	-----	200	-----	-----	100	3
NUCLEAR ENGINEERING - - - - -	1,500	900	-----	200	-----	-----	100	2
NUCLEONICS - - - - -	200	100	-----	-----	-----	-----	-----	-----
POWER, NUCLEAR - - - - -	800	700	-----	-----	-----	-----	-----	1
RADIATION SAFETY - - - - -	100	-----	-----	-----	-----	-----	-----	-----
RADIOACTIVITY - - - - -	-----	-----	-----	-----	-----	-----	-----	-----
ENGR. PROCESS, APPLICATION	33,600	21,800	1,700	1,300	-----	-----	300	2,9
ASSEMBLY METHODS - - - - -	300	300	-----	-----	-----	-----	-----	-----
CONTAINERIZING, PACKAGING - -	200	200	-----	-----	-----	-----	-----	-----
DRILLING - - - - -	1,400	1,200	100	-----	-----	-----	-----	-----
DRYING - - - - -	200	100	-----	-----	-----	-----	-----	-----
ENGINEERING - - - - -	22,800	13,700	1,300	1,100	-----	-----	200	2,30
FASTENING, JOINING - - - - -	200	100	-----	-----	-----	-----	-----	-----
FORMING, SHAPING - - - - -	300	200	-----	-----	-----	-----	-----	-----
MATERIAL HANDLING - - - - -	1,100	900	100	-----	-----	-----	-----	10
MILITARY APPLICATIONS - - - -	2,100	600	-----	-----	-----	-----	100	40
MINIATURIZATION - - - - -	-----	-----	-----	-----	-----	-----	-----	-----
PRESERVING - - - - -	-----	-----	-----	-----	-----	-----	-----	-----
PROCESSES - - - - -	3,500	3,200	-----	100	-----	-----	-----	-----
REFINING - - - - -	1,400	1,200	-----	-----	-----	-----	-----	-----
SIZE REDUCTION - - - - -	100	100	-----	-----	-----	-----	-----	-----

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND TYPES OF EMPLOYER--CONTINUED

## TYPES OF EMPLOYER

	PRIVATE INDUSTRY OR BUSINESS	SELF- EM- PLOYED	COLLEGE OR UNIV.	JR.COL. OR TECH. INST.	SEC., ELEM., OTHER SCHOOL	NON- PROFIT ORG., OTHER THAN A SCHOOL	FEDERAL GOVT. CIVILIAN EMPLOYEE	USPHS, MILI- TARY SERVICE	STATE GOVT.	LOCAL GOVT.	OTHER	NO REPORT
00	6,000	300	1,200	-----	-----	200	700	100	-----	-----	100	200
00	400	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
00	400	-----	100	-----	-----	-----	100	-----	-----	-----	-----	-----
00	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
00	400	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
00	2,100	100	400	-----	-----	100	100	-----	-----	-----	-----	100
00	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
00	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
00	200	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
00	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
00	300	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
00	200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
00	200	-----	100	-----	-----	-----	-----	-----	-----	-----	-----	-----
00	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
00	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
00	400	-----	100	-----	-----	-----	-----	-----	-----	-----	-----	-----
00	800	-----	300	-----	-----	-----	-----	-----	-----	-----	-----	100
00	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
00	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
00	100	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
00	1,700	-----	200	-----	-----	100	300	100	-----	-----	100	-----
00	900	-----	200	-----	-----	100	200	100	-----	-----	100	-----
00	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
00	700	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
00	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
00	21,800	1,700	1,300	-----	-----	300	2,900	1,300	1,200	1,100	500	1,500
00	300	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
00	200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
00	1,200	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
00	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
00	13,700	1,300	1,100	-----	-----	200	2,300	400	1,200	1,100	400	1,100
00	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
00	200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
00	900	100	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
00	600	-----	-----	-----	-----	100	400	800	-----	-----	100	100
00	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
00	-----	-----	100	-----	-----	-----	-----	-----	-----	-----	-----	100
00	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100
00	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL  
NUMBER OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY

AREAS OF TECHNOLOGY	TOTAL	PRIVATE INDUSTRY OR BUSINESS	SELF- EM- PLOYED	COLLEGE OR UNIV.	JR. COL. OR TECH. INST.	SEC., ELEM., OTHER SCHOOL
AREAS OF TECHNOLOGY, CONTINUED						
AUTOMATION AND CONTROL -	12,800	10,000	300	500	-----	-----
ADAPTIVE SYSTEMS - - - -	100	100	-----	-----	-----	-----
AUTOMATION, CYBERNETICS - -	500	500	-----	-----	-----	-----
CONTROL (GENERAL) - - - -	4,300	3,300	100	300	-----	-----
GUIDANCE, STABILITY - - - -	1,000	800	-----	100	-----	-----
INSTRUMENTATION - - - -	5,700	4,600	200	100	-----	-----
MEASUREMENT, METROLOGY - -	500	400	-----	-----	-----	-----
SERVO-MECHANISMS - - - -	200	200	-----	-----	-----	-----
TELEMETRY - - - - -	300	200	-----	-----	-----	-----
WORK MGMT, EVALUATION -	58,100	46,300	900	1,600	-----	-----
ARRANGEMENT - - - - -	100	100	-----	-----	-----	-----
CONFIGURATION CONTROL - - -	300	200	-----	-----	-----	-----
COST ENGINEERING - - - -	2,500	1,900	100	-----	-----	-----
EQUIPMENT FACILITIES - - -	500	400	-----	-----	-----	-----
FIRE PREVENTION - - - -	800	500	-----	-----	-----	-----
INDUSTRIAL ENGINEERING - -	8,300	6,500	200	500	-----	-----
MAINTAINABILITY, MAINTENANCE	2,300	1,600	-----	-----	-----	-----
MANUFACTURING TECHNOLOGY -	4,600	4,200	100	100	-----	-----
MOTION AND TIME STUDY - - -	-----	-----	-----	-----	-----	-----
NONDESTRUCTIVE TESTS - - -	200	100	-----	-----	-----	-----
OPERATING PROCEDURES - - -	1,100	800	-----	-----	-----	-----
OPERATIONS RESEARCH - - -	2,700	1,600	-----	300	-----	-----
PLANT AND FACILITIES ENGR.	7,000	5,800	100	200	-----	-----
PRODUCT ENGINEERING - - -	5,000	4,700	100	-----	-----	-----
PRODUCTION METHODS - - -	1,700	1,500	100	-----	-----	-----
PRODUCTION PLANNING, CONTROL	3,400	3,000	100	-----	-----	-----
QUALITY ASSURANCE - - - -	1,200	900	-----	-----	-----	-----
QUALITY CONTROL - - - - -	1,100	900	-----	-----	-----	-----
RADIOGRAPHY, X-RAYS - - -	-----	-----	-----	-----	-----	-----
RELIABILITY - - - - -	900	700	-----	-----	-----	-----
SAFETY ENGINEERING - - - -	600	300	-----	-----	-----	-----
SPECIFICATIONS, STANDARDS -	900	500	-----	-----	-----	-----
SYSTEMS ENGINEERING - - -	8,400	6,500	100	200	-----	-----
TESTING-ENVIRONMENTAL - - -	1,900	1,400	-----	-----	-----	-----
TESTING-LABORATORY - - - -	1,500	1,200	-----	100	-----	-----
TOOLING, TOOLS - - - - -	200	200	-----	-----	-----	-----
VALUE ENGINEERING - - - -	400	300	-----	-----	-----	-----
WORK METHODS, SIMPLIFICATION	300	200	-----	-----	-----	-----

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R OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND TYPES OF EMPLOYER--CONTINUED

TYPES OF EMPLOYER

TOTAL	PRIVATE INDUSTRY OR BUSINESS	SELF- EM- PLOYED	COLLEGE OR UNIV.	JR.COL. OR TECH. INST.	SEC., ELEM., OTHER SCHOOL	NON- PROFIT ORG., OTHER THAN A SCHOOL	FEDERAL GOVT. CIVILIAN EMPLOYEE	USPHS, MILI- TARY SERVICE	STATE GOVT.	LOCAL GOVT.	OTHER	NO REPORT
12,800	10,000	300	600	-----	-----	200	900	100	-----	-----	200	400
100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
500	500	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
4,300	3,300	100	300	-----	-----	-----	200	-----	-----	-----	100	100
1,000	800	-----	100	-----	-----	-----	100	-----	-----	-----	-----	-----
5,700	4,600	200	100	-----	-----	100	300	-----	-----	-----	100	200
500	400	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
200	200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
300	200	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
58,100	46,300	900	1,600	-----	-----	1,200	4,100	1,000	500	400	600	1,400
100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
300	200	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
2,500	1,900	100	-----	-----	-----	-----	200	-----	-----	-----	100	100
500	400	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
800	500	-----	-----	-----	-----	100	100	-----	-----	-----	-----	-----
8,300	6,500	200	500	-----	-----	100	600	100	-----	-----	100	200
2,300	1,600	-----	-----	-----	-----	-----	200	200	100	-----	100	100
4,600	4,200	100	100	-----	-----	-----	100	-----	-----	-----	-----	100
200	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1,100	800	-----	-----	-----	-----	-----	-----	100	-----	-----	-----	-----
2,700	1,600	-----	300	-----	-----	200	300	100	-----	-----	-----	-----
7,000	5,800	100	200	-----	-----	100	400	100	-----	100	100	100
5,000	4,700	100	-----	-----	-----	-----	100	-----	-----	-----	-----	100
1,700	1,500	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	100
3,400	3,000	100	-----	-----	-----	-----	-----	-----	-----	-----	100	100
1,200	900	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
1,100	900	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
900	700	-----	-----	-----	-----	-----	200	-----	-----	-----	-----	-----
600	300	-----	-----	-----	-----	-----	100	-----	100	-----	-----	100
900	500	-----	-----	-----	-----	100	200	-----	100	-----	-----	-----
8,400	6,500	100	200	-----	-----	400	800	100	-----	-----	-----	100
1,900	1,400	-----	-----	-----	-----	100	300	100	-----	-----	100	-----
1,500	1,200	-----	100	-----	-----	100	200	-----	-----	-----	-----	-----
200	200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
400	300	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
200	200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND

AREAS OF TECHNOLOGY	TOTAL	PRIVATE INDUSTRY OR BUSINESS	SELF- EM- PLOYED	COLLEGE OR UNIV.	JR.CCL. OR TECH. INST.	SEC., ELEM., OTHER SCHOOL	TYPES OF
							NON- PROFIT ORG., OTHER THAN A SCHOOL
AREAS OF TECHNOLOGY, CONTINUED							
INFORMATION, MATHEMATICS	11,700	8,800	200	1,100	100	-----	200
COMPUTER APPLICATIONS - - -	5,900	4,700	100	400	-----	-----	100
DATA PROCESSING - - - - -	1,100	1,000	-----	-----	-----	-----	-----
DISPLAY - - - - -	400	400	-----	-----	-----	-----	-----
DRAFTING, DRAWING, GRAPHICS	900	400	-----	200	-----	-----	-----
INFORMATION RETRIEVAL - - -	200	200	-----	-----	-----	-----	-----
INFORMATION THEORY - - - -	100	100	-----	-----	-----	-----	-----
LOGIC - - - - -	300	300	-----	-----	-----	-----	-----
MATHEMATICS - - - - -	400	200	-----	100	100	-----	-----
NEURAL NETS - - - - -	-----	-----	-----	-----	-----	-----	-----
REPROGRAPHY - - - - -	-----	-----	-----	-----	-----	-----	-----
STATISTICS - - - - -	200	100	-----	-----	-----	-----	-----
STRESS ANALYSIS - - - - -	1,900	1,400	-----	300	-----	-----	-----
OTHER - - - - -	10,100	6,500	500	600	-----	-----	300
NO REPORT - - - - -	5,300	2,900	400	300	-----	-----	100

NOTE - GROUPS MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND TYPES OF EMPLOYER--CONTINUED

## TYPES OF EMPLOYER

TOTAL	PRIVATE INDUSTRY OR BUSINESS	SELF- EM- PLOYED	COLLEGE OR UNIV.	JR.CCL. OR TECH. INST.	SEC., ELEM., OTHER SCHOOL	NON- PROFIT ORG., OTHER THAN A SCHOOL	FEDERAL GOVT. CIVILIAN EMPLOYEE	USPHS, MILI- TARY SERVICE	STATE GOVT.	LOCAL GOVT.	OTHER	NO REPORT
11,700	8,800	200	1,100	100	-----	200	600	100	200	100	100	200
5,900	4,700	100	400	-----	-----	100	300	100	100	-----	-----	100
1,100	1,000	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
400	400	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
500	400	-----	200	-----	-----	-----	-----	-----	-----	-----	-----	100
200	200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
300	300	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
400	200	-----	100	100	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1,900	1,400	-----	300	-----	-----	-----	100	-----	100	-----	-----	100
10,100	6,500	500	600	-----	-----	300	900	300	200	200	300	400
5,300	2,900	400	300	-----	-----	100	200	100	100	100	100	1,000

TOTAL BECAUSE OF ROUNDING.

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY

AREAS OF TECHNOLOGY	TOTAL	AGRICUL- TURE & FOOD	AIRCRAFT & SPACE	CERAMIC
ALL AREAS OF TECHNOLOGY - - - - -	308,000	4,000	33,000	2,100
BIOMEDICAL - - - - -	1,700	200	200	-----
AQUACULTURE - - - - -	-----	-----	-----	-----
BIOCHEMISTRY - - - - -	100	-----	-----	-----
BIOENGINEERING - - - - -	700	100	100	-----
BIOLOGICAL APPLICATIONS - - - - -	100	-----	-----	-----
BIOMECHANICS - - - - -	100	-----	-----	-----
BIONICS, MEDICAL ELECTRONICS - - - - -	100	-----	-----	-----
HEALTH PHYSICS - - - - -	-----	-----	-----	-----
INDUSTRIAL HEALTH - - - - -	100	-----	-----	-----
LIFE SUPPORT - - - - -	100	-----	100	-----
MEDICAL APPLICATIONS - - - - -	200	-----	-----	-----
PHYSIOLOGY - - - - -	-----	-----	-----	-----
PUBLIC HEALTH - - - - -	200	-----	-----	-----
BEHAVIORAL AND SOCIAL - - - - -	4,300	100	100	-----
ECONOMICS - - - - -	1,900	-----	-----	-----
EDUCATIONAL TECHNOLOGY - - - - -	2,000	-----	-----	-----
HISTORY (TECHNOLOGICAL) - - - - -	100	-----	-----	-----
HUMAN FACTORS - - - - -	300	-----	-----	-----
PSYCHOLOGY - - - - -	-----	-----	-----	-----
CHEMICAL AND MATERIALS - - - - -	12,400	100	1,100	400
CHEMICAL APPLICATIONS - - - - -	4,800	100	-----	-----
COMBUSTION, FUELS - - - - -	1,000	-----	200	-----
COATING, PLATING, CLADDING - - - - -	400	-----	-----	-----
CORROSION - - - - -	400	-----	-----	-----
CRYSTALS, CRYSTALLOGRAPHY - - - - -	100	-----	-----	-----
ELECTROCHEMISTRY - - - - -	300	-----	-----	-----
FILAMENT TECHNOLOGY - - - - -	200	-----	-----	-----
FUEL CELLS - - - - -	100	-----	-----	-----
MATERIAL APPLICATIONS - - - - -	3,600	-----	500	100
MATERIAL PROPERTIES - - - - -	1,400	-----	200	100
THERMOCHEMISTRY - - - - -	100	-----	-----	-----
METALLURGICAL - - - - -	12,900	-----	600	100
BENEFICIATION, ORE PROCESS. - - - - -	600	-----	-----	-----
CASTING - - - - -	400	-----	-----	-----
METALLURGY (GENERAL) - - - - -	4,300	-----	300	-----
METALLURGY, EXTRACTIVE - - - - -	1,200	-----	-----	-----
METALLURGY, PHYSICAL - - - - -	3,000	-----	200	-----
METALLURGY, POWDER - - - - -	400	-----	-----	-----
METALLURGY, PROCESS - - - - -	2,300	-----	100	-----
WELDING - - - - -	600	-----	-----	-----

# NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

NUMBER OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND PRODUCTS OR SERVICES

TECHNOLOGY	TOTAL	PRODUCTS OR SERVICES							
		AGRICUL- TURE & FOOD	AIRCRAFT & SPACE	CERAMICS	CHEMICALS & ALLIED PRODUCTS	COMMU- NICATIONS	COMPUTERS	CONSTRUC- TION & CIVIL ENGR.	EDUCA- TIONAL, INFOR- MATION SERVICES
- - - - -	308,000	4,000	33,000	2,100	19,500	7,700	11,000	45,900	14,600
- - - - -	1,700	200	200	-----	100	-----	-----	100	100
- - - - -	-----	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	100	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	700	100	100	-----	100	-----	-----	-----	100
- - - - -	100	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	100	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	100	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	-----	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	100	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	100	-----	100	-----	-----	-----	-----	-----	-----
- - - - -	200	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	-----	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	200	-----	-----	-----	-----	-----	-----	100	-----
- - - - -	4,300	100	100	-----	400	100	-----	200	1,600
- - - - -	1,900	-----	-----	-----	400	-----	-----	100	100
- - - - -	2,000	-----	-----	-----	-----	-----	-----	100	1,500
- - - - -	100	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	300	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	-----	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	12,400	100	1,100	400	4,000	100	100	500	500
- - - - -	4,800	100	-----	-----	3,100	-----	-----	100	200
- - - - -	1,000	-----	200	-----	100	-----	-----	-----	-----
- - - - -	400	-----	-----	-----	100	-----	-----	-----	-----
- - - - -	400	-----	-----	-----	100	-----	-----	-----	-----
- - - - -	100	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	300	-----	-----	-----	100	-----	-----	-----	-----
- - - - -	200	-----	-----	-----	100	-----	-----	-----	-----
- - - - -	100	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	3,600	-----	500	100	300	-----	-----	200	100
- - - - -	1,400	-----	200	100	200	-----	-----	100	200
- - - - -	100	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	12,900	-----	600	100	200	-----	100	100	500
- - - - -	600	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	400	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	4,300	-----	300	-----	100	-----	-----	-----	200
- - - - -	1,200	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	3,000	-----	200	-----	-----	-----	-----	-----	200
- - - - -	400	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	2,300	-----	100	-----	-----	-----	-----	-----	-----
- - - - -	600	-----	-----	-----	-----	-----	-----	-----	-----



NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND PRODUCTS OR

AREAS OF TECHNOLOGY	ELEC- TRICAL EQUIP- MENT, SERVICES	ELEC- TRONIC EQUIP- MENT, SERVICES	LAB.,SCI., PHOTO., OPTICAL EQUIPMENT	MACHINERY, MECHANICAL EQUIPMENT	MA- TRIALS
ALL AREAS OF TECHNOLOGY - - - - -	19,200	23,000	2,800	28,400	4,000
BIOMEDICAL - - - - -	-----	100	100	100	-----
AQUACULTURE - - - - -	-----	-----	-----	-----	-----
BIOCHEMISTRY - - - - -	-----	-----	-----	-----	-----
BIOENGINEERING - - - - -	-----	-----	-----	-----	-----
BIOLOGICAL APPLICATIONS - - - - -	-----	-----	-----	-----	-----
BIOMECHANICS - - - - -	-----	-----	-----	-----	-----
BIONICS, MEDICAL ELECTRONICS - - - - -	-----	-----	-----	-----	-----
HEALTH PHYSICS - - - - -	-----	-----	-----	-----	-----
INDUSTRIAL HEALTH - - - - -	-----	-----	-----	-----	-----
LIFE SUPPORT - - - - -	-----	-----	-----	-----	-----
MEDICAL APPLICATIONS - - - - -	-----	-----	-----	-----	-----
PHYSIOLOGY - - - - -	-----	-----	-----	-----	-----
PUBLIC HEALTH - - - - -	-----	-----	-----	-----	-----
BEHAVIORAL AND SOCIAL - - - - -	-----	100	-----	100	-----
ECONOMICS - - - - -	-----	-----	-----	-----	-----
EDUCATIONAL TECHNOLOGY - - - - -	-----	-----	-----	100	-----
HISTORY (TECHNOLOGICAL) - - - - -	-----	-----	-----	-----	-----
HUMAN FACTORS - - - - -	-----	-----	-----	-----	-----
PSYCHOLOGY - - - - -	-----	-----	-----	-----	-----
CHEMICAL AND MATERIALS - - - - -	400	200	100	1,100	-----
CHEMICAL APPLICATIONS - - - - -	-----	-----	-----	200	-----
COMBUSTION, FUELS - - - - -	-----	-----	-----	200	-----
COATING, PLATING, CLADDING - - - - -	-----	-----	-----	-----	-----
CORROSION - - - - -	-----	-----	-----	-----	-----
CRYSTALS, CRYSTALLOGRAPHY - - - - -	-----	-----	-----	-----	-----
ELECTROCHEMISTRY - - - - -	100	-----	-----	-----	-----
FILAMENT TECHNOLOGY - - - - -	-----	-----	-----	-----	-----
FUEL CELLS - - - - -	-----	-----	-----	-----	-----
MATERIAL APPLICATIONS - - - - -	200	100	-----	600	-----
MATERIAL PROPERTIES - - - - -	100	-----	-----	-----	-----
THERMOCHEMISTRY - - - - -	-----	-----	-----	-----	-----
METALLURGICAL - - - - -	300	100	-----	500	-----
BENEFICIATION, ORE PROCESS. - - - - -	-----	-----	-----	-----	-----
CASTING - - - - -	-----	-----	-----	-----	-----
METALLURGY (GENERAL) - - - - -	100	-----	-----	200	-----
METALLURGY, EXTRACTIVE - - - - -	-----	-----	-----	-----	-----
METALLURGY, PHYSICAL - - - - -	-----	-----	-----	100	-----
METALLURGY, POWDER - - - - -	-----	-----	-----	-----	-----
METALLURGY, PROCESS - - - - -	-----	-----	-----	100	-----
WELDING - - - - -	100	-----	-----	-----	-----

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## PERSONS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND PRODUCTS OR SERVICES--CONTINUED

## PRODUCTS OR SERVICES

	ELEC- TRICAL EQUIP- MENT, SERVICES	ELEC- TRONIC EQUIP- MENT, SERVICES	LAB.,SCI., PHOTO., OPTICAL EQUIPMENT	MACHINERY, MECHANICAL EQUIPMENT	MARINE TRANS- PORTATION	MEDICAL, HEALTH SERVICES	METALS, BASIC (EXCEPT MINING)	METAL FABRICATED PRODUCTS	MINING
- - - -	19,200	23,000	2,800	28,400	4,800	1,300	12,600	6,300	5,900
- - - -	-----	100	100	100	-----	400	-----	-----	-----
- - - -	-----	-----	-----	-----	-----	-----	-----	-----	-----
- - - -	-----	-----	-----	-----	-----	200	-----	-----	-----
- - - -	-----	-----	-----	-----	-----	-----	-----	-----	-----
- - - -	-----	-----	-----	-----	-----	-----	-----	-----	-----
- - - -	-----	-----	-----	-----	-----	-----	-----	-----	-----
- - - -	-----	-----	-----	-----	-----	-----	-----	-----	-----
- - - -	-----	-----	-----	-----	-----	100	-----	-----	-----
- - - -	-----	-----	-----	-----	-----	-----	-----	-----	-----
- - - -	-----	100	-----	100	-----	-----	100	-----	100
- - - -	-----	-----	-----	-----	-----	-----	-----	-----	-----
- - - -	-----	-----	-----	100	-----	-----	-----	-----	-----
- - - -	-----	-----	-----	-----	-----	-----	-----	-----	-----
- - - -	400	200	100	1,100	-----	-----	1,100	500	100
- - - -	-----	-----	-----	200	-----	-----	-----	-----	-----
- - - -	-----	-----	-----	200	-----	-----	-----	-----	-----
- - - -	-----	-----	-----	-----	-----	-----	-----	100	-----
- - - -	-----	-----	-----	-----	-----	-----	100	-----	-----
- - - -	100	-----	-----	-----	-----	-----	-----	-----	-----
- - - -	-----	-----	-----	-----	-----	-----	-----	-----	-----
- - - -	200	100	-----	600	-----	-----	500	200	-----
- - - -	100	-----	-----	-----	-----	-----	300	100	-----
- - - -	-----	-----	-----	-----	-----	-----	-----	-----	-----
- - - -	300	100	-----	500	100	-----	7,300	900	800
- - - -	-----	-----	-----	-----	-----	-----	100	-----	300
- - - -	-----	-----	-----	-----	-----	-----	300	-----	-----
- - - -	100	-----	-----	200	-----	-----	2,300	300	100
- - - -	-----	-----	-----	-----	-----	-----	700	-----	300
- - - -	-----	-----	-----	100	-----	-----	1,900	200	-----
- - - -	-----	-----	-----	-----	-----	-----	300	-----	-----
- - - -	-----	-----	-----	100	-----	-----	1,600	100	100
- - - -	100	-----	-----	-----	-----	-----	100	200	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHN  
NUMBER OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOG

AREAS OF TECHNOLOGY	PRODUCT			R T
	MOTOR VEHICLE TRANS- PORTATION	ORDNANCE	PETROLEUM	
ALL AREAS OF TECHNOLOGY - - - - -	2,500	5,200	15,500	
BIOMEDICAL - - - - -	-----	-----	-----	
AQUACULTURE - - - - -	-----	-----	-----	
BIOCHEMISTRY - - - - -	-----	-----	-----	
BIOENGINEERING - - - - -	-----	-----	-----	
BIOLOGICAL APPLICATIONS - - - - -	-----	-----	-----	
BIOMECHANICS - - - - -	-----	-----	-----	
BIONICS, MEDICAL ELECTRONICS - - - - -	-----	-----	-----	
HEALTH PHYSICS - - - - -	-----	-----	-----	
INDUSTRIAL HEALTH - - - - -	-----	-----	-----	
LIFE SUPPORT - - - - -	-----	-----	-----	
MEDICAL APPLICATIONS - - - - -	-----	-----	-----	
PHYSIOLOGY - - - - -	-----	-----	-----	
PUBLIC HEALTH - - - - -	-----	-----	-----	
BEHAVIORAL AND SOCIAL - - - - -	-----	-----	700	
ECONOMICS - - - - -	-----	-----	700	
EDUCATIONAL TECHNOLOGY - - - - -	-----	-----	-----	
HISTORY (TECHNOLOGICAL) - - - - -	-----	-----	-----	
HUMAN FACTORS - - - - -	-----	-----	-----	
PSYCHOLOGY - - - - -	-----	-----	-----	
CHEMICAL AND MATERIALS - - - - -	100	100	500	
CHEMICAL APPLICATIONS - - - - -	-----	-----	200	
COMBUSTION, FUELS - - - - -	-----	-----	100	
COATING, PLATING, CLADDING - - - - -	-----	-----	-----	
CORROSION - - - - -	-----	-----	100	
CRYSTALS, CRYSTALLOGRAPHY - - - - -	-----	-----	-----	
ELECTROCHEMISTRY - - - - -	-----	-----	-----	
FILAMENT TECHNOLOGY - - - - -	-----	-----	-----	
FUEL CELLS - - - - -	-----	-----	-----	
MATERIAL APPLICATIONS - - - - -	100	-----	100	
MATERIAL PROPERTIES - - - - -	-----	-----	-----	
THERMOCHEMISTRY - - - - -	-----	-----	-----	
METALLURGICAL - - - - -	200	100	100	
BENEFICIATION, ORE PROCESS. - - - - -	-----	-----	-----	
CASTING - - - - -	-----	-----	-----	
METALLURGY (GENERAL) - - - - -	100	-----	-----	
METALLURGY, EXTRACTIVE - - - - -	-----	-----	-----	
METALLURGY, PHYSICAL - - - - -	-----	-----	-----	
METALLURGY, POWDER - - - - -	-----	-----	-----	
METALLURGY, PROCESS - - - - -	-----	-----	-----	
WELDING - - - - -	-----	-----	-----	

# NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

NUMBER OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND PRODUCTS OR SERVICES--CONTINUED

OF TECHNOLOGY		PRODUCTS OR SERVICES						
		MOTOR VEHICLE TRANS- PORTATION	ORDNANCE	PETROLEUM	RAILWAY, RAPID TRANSIT	UTILITIES	OTHER PRODUCTS, SERVICES	NO REPORT OF PRODUCTS OR SERVICES
CHNOLOGY	- - - - -	2,500	5,200	15,500	1,500	14,700	11,300	15,200
	- - - - -	-----	-----	-----	-----	-----	100	200
	- - - - -	-----	-----	-----	-----	-----	-----	-----
	- - - - -	-----	-----	-----	-----	-----	-----	100
IONS	- - - - -	-----	-----	-----	-----	-----	-----	-----
ELECTRONICS	- - - - -	-----	-----	-----	-----	-----	-----	-----
	- - - - -	-----	-----	-----	-----	-----	-----	-----
	- - - - -	-----	-----	-----	-----	-----	-----	-----
S	- - - - -	-----	-----	-----	-----	-----	-----	-----
	- - - - -	-----	-----	-----	-----	-----	-----	-----
	- - - - -	-----	-----	-----	-----	-----	-----	-----
OCIAL	- - - - -	-----	-----	700	-----	200	300	200
	- - - - -	-----	-----	700	-----	200	200	-----
OGY	- - - - -	-----	-----	-----	-----	-----	-----	100
CAL)	- - - - -	-----	-----	-----	-----	-----	-----	-----
	- - - - -	-----	-----	-----	-----	-----	-----	-----
	- - - - -	-----	-----	-----	-----	-----	-----	-----
ERIALS	- - - - -	100	100	500	-----	300	500	700
NS	- - - - -	-----	-----	200	-----	-----	200	400
	- - - - -	-----	-----	100	-----	200	-----	100
LADDING	- - - - -	-----	-----	-----	-----	-----	-----	-----
	- - - - -	-----	-----	100	-----	-----	-----	-----
GRAPHY	- - - - -	-----	-----	-----	-----	-----	-----	-----
	- - - - -	-----	-----	-----	-----	-----	-----	-----
	- - - - -	-----	-----	-----	-----	-----	-----	-----
NS	- - - - -	100	-----	100	-----	100	100	200
	- - - - -	-----	-----	-----	-----	-----	100	100
	- - - - -	-----	-----	-----	-----	-----	-----	-----
	- - - - -	200	100	100	-----	-----	200	800
PROCESS.	- - - - -	-----	-----	-----	-----	-----	-----	-----
	- - - - -	-----	-----	-----	-----	-----	-----	-----
	- - - - -	100	-----	-----	-----	-----	100	400
IVE	- - - - -	-----	-----	-----	-----	-----	-----	100
L	- - - - -	-----	-----	-----	-----	-----	-----	200
	- - - - -	-----	-----	-----	-----	-----	-----	-----
	- - - - -	-----	-----	-----	-----	-----	-----	100

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL,  
NUMBER OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND PRODUCTS OF

PRODUCTS OF

AREAS OF TECHNOLOGY

TOTAL

AGRICUL-  
TURE &  
FOOD

AIRCRAFT  
& SPACE

CERAMICS

CHEMICALS  
& ALLIED  
PRODUCTS

AREAS OF TECHNOLOGY, CONTINUED

EARTH, ATMOSPHERE, MARINE	10,600	100	200	100	100
ATMOSPHERIC SCIENCES	200	-----	100	-----	-----
DESALTING	200	-----	-----	-----	-----
EARTH SCIENCES	900	-----	-----	-----	-----
GEOCHEMISTRY	100	-----	-----	-----	-----
GEODESY	100	-----	-----	-----	-----
GEOLOGY	2,700	-----	-----	-----	-----
GEOPHYSICS	400	-----	-----	-----	-----
HYDROGRAPHY	-----	-----	-----	-----	-----
HYDROLOGY	1,000	100	-----	-----	-----
MARINE SCIENCES	900	-----	-----	-----	-----
MINING, SURFACE	1,300	-----	-----	-----	-----
MINING, UNDERGROUND	1,900	-----	-----	-----	-----
MINING, UNDERWATER	100	-----	-----	-----	-----
OCEANOGRAPHY	300	-----	-----	-----	-----
OFFSHORE OPERATIONS	600	-----	-----	-----	-----
UNDERWATER TECHNOLOGY	200	-----	-----	-----	-----
ENVIRONMENTAL, STRUCTURAL	35,900	800	2,100	300	400
AIR POLLUTION	900	-----	-----	-----	100
CONCRETE TECHNOLOGY	1,400	-----	-----	200	-----
CONSERVATION, RECLAMATION	700	200	-----	-----	-----
DRAINAGE, IRRIGATION	900	300	-----	-----	-----
ENVIRONMENTAL CONTROL	3,500	100	200	-----	-----
ENVIRONMENTAL FACTORS	300	-----	100	-----	-----
NOISE REDUCTION	200	-----	-----	-----	-----
PHOTOGRAMMETRY	100	-----	-----	-----	-----
POLLUTION	300	-----	-----	-----	100
PUBLIC SAFETY	200	-----	-----	-----	-----
ROCK MECHANICS	200	-----	-----	-----	-----
SANITARY ENGINEERING	2,900	-----	-----	-----	-----
SOILS	1,600	-----	-----	-----	-----
SOLID WASTE	100	-----	-----	-----	-----
STRUCTURES	13,300	100	1,500	-----	-----
SURVEYING, MAPPING	900	-----	-----	-----	-----
TRAFFIC	500	-----	-----	-----	-----
TRANSPORTATION	3,800	-----	200	-----	-----
WASTE DISPOSAL	500	-----	-----	-----	-----
WATER POLLUTION	900	-----	-----	-----	-----
WATER RESOURCES AND SUPPLY	2,700	100	-----	-----	-----

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## MEETING CRITERIA BY AREAS OF TECHNOLOGY AND PRODUCTS OR SERVICES--CONTINUED

PRODUCTS OR SERVICES								
TOTAL	AGRICUL- TURE & FOOD	AIRCRAFT & SPACE	CERAMICS	CHEMICALS & ALLIED PRODUCTS	COMMU- NICATIONS	COMPUTERS	CONSTRUC- TION & CIVIL ENGR	EDUCA- TIONAL, INFOR- MATION SERVICES
10,800	100	200	100	100	-----	100	1,500	500
200	-----	100	-----	-----	-----	-----	-----	-----
200	-----	-----	-----	-----	-----	-----	-----	-----
900	-----	-----	-----	-----	-----	-----	300	100
100	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----
2,700	-----	-----	-----	-----	-----	-----	100	200
400	-----	-----	-----	-----	-----	-----	-----	-----
1,000	100	-----	-----	-----	-----	-----	700	100
900	-----	-----	-----	-----	-----	-----	-----	-----
1,300	-----	-----	-----	-----	-----	-----	-----	-----
1,900	-----	-----	-----	-----	-----	-----	100	-----
100	-----	-----	-----	-----	-----	-----	-----	-----
300	-----	-----	-----	-----	-----	-----	-----	-----
600	-----	-----	-----	-----	-----	-----	100	-----
200	-----	-----	-----	-----	-----	-----	-----	-----
35,900	800	2,100	300	400	-----	100	20,400	1,600
900	-----	-----	-----	100	-----	-----	100	-----
1,400	-----	-----	200	-----	-----	-----	1,000	100
700	200	-----	-----	-----	-----	-----	400	-----
900	300	-----	-----	-----	-----	-----	500	100
3,500	100	200	-----	-----	-----	-----	500	100
300	-----	100	-----	-----	-----	-----	100	-----
200	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	100	-----
300	-----	-----	-----	100	-----	-----	-----	-----
200	-----	-----	-----	-----	-----	-----	100	-----
200	-----	-----	-----	-----	-----	-----	100	-----
2,900	-----	-----	-----	-----	-----	-----	2,000	200
1,600	-----	-----	-----	-----	-----	-----	1,200	200
100	-----	-----	-----	-----	-----	-----	-----	-----
13,300	100	1,500	-----	-----	-----	-----	8,400	600
900	-----	-----	-----	-----	-----	-----	700	100
500	-----	-----	-----	-----	-----	-----	400	-----
3,800	-----	200	-----	-----	-----	-----	2,300	100
500	-----	-----	-----	-----	-----	-----	200	-----
900	-----	-----	-----	-----	-----	-----	500	-----
2,700	100	-----	-----	-----	-----	-----	1,800	100

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND PRODUCT

PRODUCTS OR

AREAS OF TECHNOLOGY

ELEC-  
TRICAL  
EQUIP-  
MENT,  
SERVICES  
ELEC-  
TRONIC  
EQUIP-  
MENT,  
SERVICES  
LAB.,SCI.,  
PHOTO.,  
OPTICAL  
EQUIPMENT  
MACHINERY, MAR  
MECHANICAL TRA  
EQUIPMENT PORT

AREAS OF TECHNOLOGY, CONTINUED

EARTH, ATMOSPHERE, MARINE	-----	200	100	200	---
ATMOSPHERIC SCIENCES	-----	-----	-----	-----	---
DESALTING	-----	-----	-----	-----	---
EARTH SCIENCES	-----	-----	-----	-----	---
GEOCHEMISTRY	-----	-----	-----	-----	---
GEODESY	-----	-----	-----	-----	---
GEOLOGY	-----	-----	-----	-----	---
GEOPHYSICS	-----	100	-----	-----	---
HYDROGRAPHY	-----	-----	-----	-----	---
HYDROLOGY	-----	-----	-----	-----	---
MARINE SCIENCES	-----	-----	-----	-----	---
MINING, SURFACE	-----	-----	-----	-----	---
MINING, UNDERGROUND	-----	-----	-----	-----	---
MINING, UNDERWATER	-----	-----	-----	-----	---
OCEANOGRAPHY	-----	-----	-----	-----	---
OFFSHORE OPERATIONS	-----	-----	-----	-----	---
UNDERWATER TECHNOLOGY	-----	100	-----	-----	---
ENVIRONMENTAL, STRUCTURAL	-----	200	100	100	2,700
AIR POLLUTION	-----	-----	-----	-----	200
CONCRETE TECHNOLOGY	-----	-----	-----	-----	-----
CONSERVATION, RECLAMATION	-----	-----	-----	-----	-----
DRAINAGE, IRRIGATION	-----	-----	-----	-----	-----
ENVIRONMENTAL CONTROL	-----	100	-----	-----	2,000
ENVIRONMENTAL FACTORS	-----	-----	-----	-----	-----
NOISE REDUCTION	-----	-----	-----	-----	-----
PHOTOGRAMMETRY	-----	-----	-----	-----	-----
POLLUTION	-----	-----	-----	-----	-----
PUBLIC SAFETY	-----	-----	-----	-----	-----
ROCK MECHANICS	-----	-----	-----	-----	-----
SANITARY ENGINEERING	-----	-----	-----	-----	100
SOILS	-----	-----	-----	-----	-----
SOLID WASTE	-----	-----	-----	-----	-----
STRUCTURES	-----	-----	-----	-----	100
SURVEYING, MAPPING	-----	-----	-----	-----	-----
TRAFFIC	-----	-----	-----	-----	-----
TRANSPORTATION	-----	-----	-----	-----	-----
WASTE DISPOSAL	-----	-----	-----	-----	-----
WATER POLLUTION	-----	-----	-----	-----	-----
WATER RESOURCES AND SUPPLY	-----	-----	-----	-----	100

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969  
 PERSONS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND PRODUCTS OR SERVICES--CONTINUED

PRODUCTS OR SERVICES

ELEC- TRICAL EQUIP- MENT, SERVICES	ELEC- TRONIC EQUIP- MENT, SERVICES	LAB.,SCI., PHOTO., OPTICAL EQUIPMENT	MACHINERY, MECHANICAL EQUIPMENT	MARINE TRANS- PORTATION	MEDICAL, HEALTH SERVICES	METALS, BASIC (EXCEPT MINING)	METAL FABRICATED PRODUCTS	MINING
-----	200	100	200	900	-----	100	-----	3,600
-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	100
-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	1,100
-----	100	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	700	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	1,000
-----	-----	-----	-----	-----	-----	-----	-----	1,300
-----	-----	-----	-----	100	-----	-----	-----	-----
-----	-----	-----	-----	100	-----	-----	-----	-----
-----	100	-----	-----	100	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	200	100	100	2,700	600	100	100	400
-----	-----	-----	-----	200	-----	100	-----	200
-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	100	-----	2,000	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	100
-----	-----	-----	100	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	100	300	-----	-----	300	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	200	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	100	-----	-----	-----	-----	-----



## AREAS OF TECHNOLOGY

AREAS OF TECHNOLOGY, CONTINUED



ERIC  
Full Text Provided by ERIC

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

NUMBER OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND PRODUCTS OR SERVICES--CONTINUED

## PRODUCTS OR SERVICES

TECHNOLOGY	MOTOR VEHICLE TRANS- PORTATION	ORDNANCE	PETROLEUM	RAILWAY, RAPID TRANSIT	UTILITIES	OTHER PRODUCTS, SERVICES	NO REPORT OF PRODUCTS OR SERVICES
CONTINUED							
NAUTICAL	-----	100	1,800	-----	100	200	900
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	100	-----	-----
-----	-----	-----	400	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	700	-----	-----	-----	300
-----	-----	-----	100	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	100	100
-----	-----	-----	-----	-----	-----	-----	100
-----	-----	-----	100	-----	-----	-----	200
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	300	-----	-----	-----	-----
-----	-----	100	-----	-----	-----	-----	-----
AGRICULTURAL	300	100	400	400	1,500	700	2,300
-----	-----	-----	-----	-----	100	100	-----
CONSTRUCTION	-----	-----	-----	-----	-----	-----	100
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	100	100	100
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	100	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	400	-----	100
-----	-----	-----	-----	-----	-----	-----	100
-----	-----	-----	100	100	200	100	1,300
-----	100	-----	-----	-----	-----	-----	-----
-----	200	-----	100	400	-----	-----	200
-----	-----	-----	-----	-----	100	-----	-----
-----	-----	-----	-----	-----	100	100	-----
PLYWOOD	-----	-----	-----	-----	400	-----	200

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL  
NUMBER OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY

AREAS OF TECHNOLOGY										TOTAL	AGRICUL- TURE & FOOD	AIRCRAFT & SPACE	CE
AREAS OF TECHNOLOGY, CONTINUED													
ELECTROMAGNETIC	-	-	-	-	-	-	-	-	-	44,800	100	2,300	
CIRCUITS, NETWORKS	-	-	-	-	-	-	-	-	-	1,300	-----	100	-
COMMUNICATION	-	-	-	-	-	-	-	-	-	4,200	-----	200	-
DIELECTRICS	-	-	-	-	-	-	-	-	-	100	-----	-----	-
ELECTRICAL APPLICATIONS	-	-	-	-	-	-	-	-	-	4,300	-----	100	-
ELECTRICAL ENGINEERING	-	-	-	-	-	-	-	-	-	16,200	-----	500	-
ELECTROMAGNETIC RADIATION	-	-	-	-	-	-	-	-	-	900	-----	-----	-
ELECTROMECHANICAL TECH.	-	-	-	-	-	-	-	-	-	1,500	-----	100	-
ELECTRONIC APPLICATIONS	-	-	-	-	-	-	-	-	-	6,900	-----	600	-
INFRA-RED, RADICMETRY	-	-	-	-	-	-	-	-	-	200	-----	-----	-
INSULATION, ELECTRICAL	-	-	-	-	-	-	-	-	-	200	-----	-----	-
MAGNETICS, MAGNETISM	-	-	-	-	-	-	-	-	-	400	-----	-----	-
NAVIGATION	-	-	-	-	-	-	-	-	-	800	-----	300	-
PHOTOELECTRICITY	-	-	-	-	-	-	-	-	-	100	-----	-----	-
POWER, ELECTRICAL	-	-	-	-	-	-	-	-	-	5,300	-----	100	-
RADIO FREQ. COMPATIBILITY	-	-	-	-	-	-	-	-	-	100	-----	-----	-
RECORDING	-	-	-	-	-	-	-	-	-	100	-----	-----	-
SUPERCONDUCTIVITY	-	-	-	-	-	-	-	-	-	-----	-----	-----	-
TELECOMMUNICATIONS	-	-	-	-	-	-	-	-	-	2,100	-----	100	-
DYNAMICS AND MECHANICS										42,200	400	9,900	
AERODYNAMICS	-	-	-	-	-	-	-	-	-	4,300	-----	3,600	-
ASTRODYNAMICS	-	-	-	-	-	-	-	-	-	700	-----	600	-
ENERGY GEN. AND CONVERSION	-	-	-	-	-	-	-	-	-	1,500	-----	100	-
EXPLOSIVE EFFECTS	-	-	-	-	-	-	-	-	-	200	-----	-----	-
FLUID DYNAMICS, MECHANICS	-	-	-	-	-	-	-	-	-	2,500	-----	800	-
FLUIDICS	-	-	-	-	-	-	-	-	-	200	-----	-----	-
FRICTION	-	-	-	-	-	-	-	-	-	100	-----	-----	-
GAS DYNAMICS	-	-	-	-	-	-	-	-	-	500	-----	300	-
HIGH PRESSURE	-	-	-	-	-	-	-	-	-	100	-----	-----	-
HYDRAULICS	-	-	-	-	-	-	-	-	-	2,200	-----	100	-
HYDRODYNAMICS	-	-	-	-	-	-	-	-	-	300	-----	-----	-
KINETICS	-	-	-	-	-	-	-	-	-	300	-----	-----	-
LUBRICATION	-	-	-	-	-	-	-	-	-	300	-----	100	-
MAGNETOHYDRODYNAMICS	-	-	-	-	-	-	-	-	-	100	-----	-----	-
MASS TRANSFER	-	-	-	-	-	-	-	-	-	400	-----	-----	-
MECHANICAL APPLICATIONS	-	-	-	-	-	-	-	-	-	3,700	100	300	-
MECHANICAL ENGINEERING	-	-	-	-	-	-	-	-	-	19,200	200	1,500	-
MECHANICS	-	-	-	-	-	-	-	-	-	1,400	-----	300	-
POWER, MECHANICAL	-	-	-	-	-	-	-	-	-	1,400	-----	100	-
PROPULSION	-	-	-	-	-	-	-	-	-	2,700	-----	2,000	-
VACUUM TECHNOLOGY	-	-	-	-	-	-	-	-	-	200	-----	-----	-

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND PRODUCTS OR SERVICES--CONTINUED

TECHNOLOGY	TOTAL	PRODUCTS OR SERVICES							
		AGRICUL- TURE & FOOD	AIRCRAFT & SPACE	CERAMICS	CHEMICALS & ALLIED PRODUCTS	COMMU- NICATIONS	COMPUTERS	CONSTRUC- TION & CIVIL ENGR	EDUCA- TIONAL, INFOR- MATION SERVICES
44,800	100	2,300	100	400	5,200	1,700	900	1,300	
1,300	-----	100	-----	-----	100	300	-----	100	
4,200	-----	200	-----	-----	2,600	100	-----	100	
100	-----	-----	-----	-----	-----	-----	-----	-----	
4,300	-----	100	-----	100	-----	-----	200	100	
16,200	-----	500	-----	200	500	500	400	900	
900	-----	-----	-----	-----	100	-----	-----	100	
1,500	-----	100	-----	-----	-----	100	-----	-----	
6,900	-----	600	-----	-----	400	500	-----	100	
200	-----	-----	-----	-----	-----	-----	-----	-----	
200	-----	-----	-----	-----	-----	-----	-----	-----	
400	-----	-----	-----	-----	-----	100	-----	-----	
800	-----	300	-----	-----	-----	-----	-----	-----	
100	-----	-----	-----	-----	-----	-----	-----	-----	
5,300	-----	100	-----	-----	-----	100	200	-----	
100	-----	-----	-----	-----	-----	-----	-----	-----	
100	-----	-----	-----	-----	-----	-----	-----	-----	
2,100	-----	100	-----	-----	1,500	100	-----	-----	
42,200	400	5,900	200	1,400	100	300	3,000	3,200	
4,300	-----	3,600	-----	-----	-----	-----	-----	200	
700	-----	600	-----	-----	-----	-----	-----	-----	
1,500	-----	100	-----	-----	-----	-----	100	-----	
200	-----	-----	-----	100	-----	-----	-----	-----	
2,500	-----	800	-----	100	-----	-----	-----	500	
200	-----	-----	-----	-----	-----	-----	-----	-----	
100	-----	-----	-----	-----	-----	-----	-----	-----	
500	-----	300	-----	-----	-----	-----	-----	100	
100	-----	-----	-----	-----	-----	-----	-----	-----	
2,200	-----	100	-----	-----	-----	-----	1,100	100	
300	-----	-----	-----	-----	-----	-----	-----	-----	
300	-----	-----	-----	100	-----	-----	-----	100	
300	-----	100	-----	-----	-----	-----	-----	-----	
100	-----	-----	-----	-----	-----	-----	-----	-----	
400	-----	-----	-----	200	-----	-----	-----	100	
3,700	100	300	-----	100	-----	-----	200	200	
19,200	200	1,500	100	700	100	200	1,400	1,300	
1,400	-----	300	-----	-----	-----	-----	100	600	
1,400	-----	100	-----	-----	-----	-----	100	-----	
2,700	-----	2,000	-----	100	-----	-----	-----	100	
200	-----	-----	-----	-----	-----	-----	-----	-----	

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND

PRODUCTION

AREAS OF TECHNOLOGY

ELEC- TRICAL EQUIP- MENT, SERVICES	ELEC- TRONIC EQUIP- MENT, SERVICES	LAB., SCI., PHOTO., OPTICAL EQUIPMENT	MACHINER MECHANIC EQUIPME
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AREAS OF TECHNOLOGY, CONTINUED

ELECTROMAGNETIC - - - - -	10,500	10,000	200	700
CIRCUITS, NETWORKS - - - - -	100	600	-----	-----
COMMUNICATION - - - - -	100	800	-----	-----
DIELECTRICS - - - - -	-----	-----	-----	-----
ELECTRICAL APPLICATIONS - - - - -	2,300	200	-----	100
ELECTRICAL ENGINEERING - - - - -	5,300	2,200	-----	300
ELECTROMAGNETIC RADIATION - - - - -	-----	600	-----	-----
ELECTROMECHANICAL TECH. - - - - -	400	300	100	100
ELECTRONIC APPLICATIONS - - - - -	300	4,300	100	-----
INFRA-RED, RADICMETRY - - - - -	-----	100	-----	-----
INSULATION, ELECTRICAL - - - - -	200	-----	-----	-----
MAGNETICS, MAGNETISM - - - - -	200	-----	-----	-----
NAVIGATION - - - - -	-----	300	-----	-----
PHOTOELECTRICITY - - - - -	-----	-----	-----	-----
POWER, ELECTRICAL - - - - -	1,300	-----	-----	100
RADIO FREQ. COMPATIBILITY - - - - -	-----	100	-----	-----
RECORDING - - - - -	-----	100	-----	-----
SUPERCONDUCTIVITY - - - - -	-----	-----	-----	-----
TELECOMMUNICATIONS - - - - -	100	300	-----	-----
DYNAMICS AND MECHANICS - - - - -	1,100	800	300	11,200
AERODYNAMICS - - - - -	-----	-----	-----	100
ASTRODYNAMICS - - - - -	-----	-----	-----	-----
ENERGY GEN. AND CONVERSION - - - - -	300	100	-----	100
EXPLOSIVE EFFECTS - - - - -	-----	-----	-----	-----
FLUID DYNAMICS, MECHANICS - - - - -	-----	-----	-----	400
FLUIDICS - - - - -	-----	-----	-----	100
FRICTION - - - - -	-----	-----	-----	-----
GAS DYNAMICS - - - - -	-----	-----	-----	-----
HIGH PRESSURE - - - - -	-----	-----	-----	-----
HYDRAULICS - - - - -	-----	-----	-----	500
HYDRODYNAMICS - - - - -	-----	-----	-----	-----
KINETICS - - - - -	-----	-----	-----	-----
LUBRICATION - - - - -	-----	-----	-----	100
MAGNETOHYDRODYNAMICS - - - - -	-----	-----	-----	-----
MASS TRANSFER - - - - -	-----	-----	-----	-----
MECHANICAL APPLICATIONS - - - - -	100	-----	-----	1,600
MECHANICAL ENGINEERING - - - - -	500	500	100	7,600
MECHANICS - - - - -	-----	-----	-----	100
POWER, MECHANICAL - - - - -	100	-----	-----	400
PROPULSION - - - - -	-----	-----	-----	100
SPIN TECHNOLOGY - - - - -	-----	100	-----	-----

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## PERSONS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND PRODUCTS OR SERVICES--CONTINUED

## PRODUCTS OR SERVICES

ELEC- TRICAL EQUIP- MENT, SERVICES	ELEC- TRONIC EQUIP- MENT, SERVICES	LAB.,SCI., PHOTO., OPTICAL EQUIPMENT	MACHINERY, MECHANICAL EQUIPMENT	MARINE TRANS- PORTATION	MEDICAL, HEALTH SERVICES	METALS, BASIC (EXCEPT MINING)	METAL FABRICATED PRODUCTS	MINING
- - - -	10,500	10,000	200	700	300	-----	200	100
- - - -	100	600	-----	-----	-----	-----	-----	-----
- - - -	100	800	-----	-----	-----	-----	-----	-----
- - - -	-----	-----	-----	-----	-----	-----	-----	-----
- - - -	2,300	200	-----	100	100	-----	-----	-----
- - - -	5,300	2,200	-----	300	200	-----	100	100
- - - -	-----	600	-----	-----	-----	-----	-----	-----
- - - -	400	300	100	100	-----	-----	-----	-----
- - - -	300	4,300	100	-----	-----	-----	-----	-----
- - - -	-----	100	-----	-----	-----	-----	-----	-----
- - - -	200	-----	-----	-----	-----	-----	-----	-----
- - - -	200	-----	-----	-----	-----	-----	-----	-----
- - - -	-----	300	-----	-----	-----	-----	-----	-----
- - - -	-----	-----	-----	-----	-----	-----	-----	-----
- - - -	1,300	-----	-----	100	-----	-----	-----	-----
- - - -	-----	100	-----	-----	-----	-----	-----	-----
- - - -	-----	100	-----	-----	-----	-----	-----	-----
- - - -	-----	-----	-----	-----	-----	-----	-----	-----
- - - -	100	300	-----	-----	-----	-----	-----	-----
- - - -	1,100	800	300	11,200	800	100	500	900
- - - -	-----	-----	-----	100	-----	-----	-----	-----
- - - -	300	100	-----	100	-----	-----	-----	-----
- - - -	-----	-----	-----	400	100	-----	100	-----
- - - -	-----	-----	-----	100	-----	-----	-----	-----
- - - -	-----	-----	-----	-----	-----	-----	-----	-----
- - - -	-----	-----	-----	500	-----	-----	-----	-----
- - - -	-----	-----	-----	100	-----	-----	-----	-----
- - - -	-----	-----	-----	100	-----	-----	-----	-----
- - - -	100	-----	-----	1,600	100	-----	100	-----
- - - -	500	500	100	7,600	300	100	300	500
- - - -	-----	-----	-----	100	-----	-----	-----	-----
- - - -	100	-----	-----	400	-----	-----	-----	-----
- - - -	-----	-----	-----	100	100	-----	-----	-----
- - - -	-----	100	-----	-----	-----	-----	-----	-----

NATIONAL REGISTER OF SCIENTIFIC  
NUMBER OF ENGINEERS MEETING CRITERIA BY AREAS

AREAS OF TECHNOLOGY

MOTOR  
VEHICLE  
TRANS-  
PORTATION      ORDNANCE

AREAS OF TECHNOLOGY, CONTINUED

ELECTROMAGNETIC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	500
CIRCUITS, NETWORKS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	-----
COMMUNICATION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	-----
DIELECTRICS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	-----
ELECTRICAL APPLICATIONS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	-----
ELECTRICAL ENGINEERING	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	200
ELECTROMAGNETIC RADIATION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	-----
ELECTROMECHANICAL TECH.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	100
ELECTRONIC APPLICATIONS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	100
INFRA-RED, RADICMETRY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	-----
INSULATION, ELECTRICAL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	-----
MAGNETICS, MAGNETISM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	-----
NAVIGATION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	-----
PHOTOELECTRICITY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	-----
POWER, ELECTRICAL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	-----
RADIO FREQ. COMPATIBILITY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	-----
RECORDING	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	-----
SUPERCONDUCTIVITY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	-----
TELECOMMUNICATIONS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	-----
DYNAMICS AND MECHANICS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	500	1,100
AERODYNAMICS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	200
ASTRODYNAMICS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	-----
ENERGY GEN. AND CONVERSION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	-----
EXPLOSIVE EFFECTS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	100
FLUID DYNAMICS, MECHANICS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	-----
FLUIDICS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	-----
FRICTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	-----
GAS DYNAMICS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	-----
HIGH PRESSURE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	-----
HYDRAULICS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	-----
HYDRODYNAMICS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	-----
KINETICS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	-----
LUBRICATION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	-----
MAGNETOHYDRODYNAMICS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	-----
MASS TRANSFER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	-----
MECHANICAL APPLICATIONS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	100
MECHANICAL ENGINEERING	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	300	400
MECHANICS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	-----
POWER, MECHANICAL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	-----
PROPULSION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	300
VACUUM TECHNOLOGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-----	-----

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ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND PRODUCTS OR SERVICES--CONTINUED

PRODUCTS OR SERVICES

OGY

MOTOR VEHICLE TRANS- PORTATION	ORDNANCE	PETROLEUM	RAILWAY, RAPID TRANSIT	UTILITIES	OTHER PRODUCTS, SERVICES	NO REPORT OF PRODUCTS OR SERVICES
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ED

100	500	300	100	7,100	600	2,000
						100
				100		200
				500	100	300
	200	100	100	3,400	300	900
	100					
	100	100			100	100
				2,900		300
						100
500	1,100	1,300	200	1,800	1,000	2,100
	200					200
				400		
	100					
		300			100	100
		100				
						100
		200				
100	100	100			100	400
300	400	600	200	700	600	1,000
					100	100
				500		100
	300					100



NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND SPECIALIZATION

AREAS OF TECHNOLOGY

TOTAL

AGRICULTURE & FOOD

AIRCRAFT & SPACE

CERAMICS

AREAS OF TECHNOLOGY, CONTINUED

HEAT, LIGHT, APPL. PHYSICS - - - - -	8,800	-----	1,600	-----
ACOUSTICS, SONICS - - - - -	600	-----	100	-----
APPLIED PHYSICS - - - - -	600	-----	200	-----
ASTRONOMY AND ASTROPHYSICS - - - - -	100	-----	100	-----
CRYOGENICS - - - - -	500	-----	100	-----
HEAT TRANSFER - - - - -	2,800	-----	700	-----
HIGH TEMPERATURE - - - - -	100	-----	-----	-----
HOLOGRAPHY - - - - -	-----	-----	-----	-----
ILLUMINATION, LIGHTING - - - - -	300	-----	-----	-----
INSULATION, THERMAL - - - - -	100	-----	-----	-----
OPTICS - - - - -	300	-----	-----	-----
PHOTOGRAPHY - - - - -	300	-----	-----	-----
PHYSICS - - - - -	500	-----	100	-----
PLASMAS - - - - -	200	-----	100	-----
RADIO ASTRONOMY - - - - -	-----	-----	-----	-----
SOLID STATE - - - - -	500	-----	-----	-----
THERMODYNAMICS - - - - -	1,300	-----	300	-----
THERMOPHYSICS - - - - -	100	-----	100	-----
ULTRASONICS - - - - -	100	-----	-----	-----
UNDERWATER ACOUSTICS - - - - -	200	-----	-----	-----
NUCLEAR - - - - -	2,600	-----	100	-----
NUCLEAR ENGINEERING - - - - -	1,500	-----	100	-----
NUCLEONICS - - - - -	200	-----	-----	-----
POWER, NUCLEAR - - - - -	800	-----	-----	-----
RADIATION SAFETY - - - - -	100	-----	-----	-----
RADIOACTIVITY - - - - -	-----	-----	-----	-----
ENGR. PROCESS, APPLICATION - - - - -	33,600	700	2,000	200
ASSEMBLY METHODS - - - - -	300	-----	-----	-----
CONTAINERIZING, PACKAGING - - - - -	200	-----	-----	-----
DRILLING - - - - -	1,400	-----	-----	-----
DRYING - - - - -	200	-----	-----	-----
ENGINEERING - - - - -	22,800	400	1,500	100
FASTENING, JOINING - - - - -	200	-----	-----	-----
FORMING, SHAPING - - - - -	300	-----	-----	-----
MATERIAL HANDLING - - - - -	1,100	100	-----	-----
MILITARY APPLICATIONS - - - - -	2,100	-----	400	-----
MINIATURIZATION - - - - -	-----	-----	-----	-----
PRESERVING - - - - -	-----	-----	-----	-----
PROCESSES - - - - -	3,500	200	-----	100
REFINING - - - - -	1,400	-----	-----	-----
SELECTION - - - - -	100	-----	-----	-----

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND PRODUCTS OR SERVICES--CONTINUED

GY	TOTAL	PRODUCTS OR SERVICES							
		AGRICUL- TURE & FOOD	AIRCRAFT & SPACE	CERAMICS	CHEMICALS & ALLIED PRODUCTS	COMMU- NICATIONS	COMPUTERS	CONSTRUC- TION & CIVIL ENGR	EDUCA- TIONAL, INFOR- MATION SERVICES
- - - - -	8,800	-----	1,600	100	600	100	100	200	800
- - - - -	600	-----	100	-----	-----	-----	-----	-----	-----
- - - - -	600	-----	200	-----	-----	-----	-----	-----	100
- - - - -	100	-----	100	-----	-----	-----	-----	-----	-----
- - - - -	500	-----	100	-----	200	-----	-----	-----	-----
- - - - -	2,800	-----	700	-----	100	-----	-----	-----	300
- - - - -	100	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	300	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	100	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	300	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	300	-----	-----	-----	100	-----	-----	-----	-----
- - - - -	500	-----	100	-----	-----	-----	-----	-----	100
- - - - -	200	-----	100	-----	-----	-----	-----	-----	-----
- - - - -	500	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	1,300	-----	300	-----	100	-----	-----	-----	300
- - - - -	100	-----	100	-----	-----	-----	-----	-----	-----
- - - - -	100	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	200	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	2,600	-----	100	-----	300	-----	-----	100	200
- - - - -	1,500	-----	100	-----	300	-----	-----	-----	200
- - - - -	200	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	800	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	100	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	33,600	700	2,000	200	3,900	300	300	10,000	1,000
- - - - -	300	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	200	-----	-----	-----	100	-----	-----	-----	-----
- - - - -	1,400	-----	-----	-----	-----	-----	-----	100	-----
- - - - -	200	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	22,800	400	1,500	100	1,600	200	200	9,200	900
- - - - -	200	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	300	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	1,100	100	-----	-----	100	-----	-----	100	-----
- - - - -	2,100	-----	400	-----	-----	100	100	500	-----
- - - - -	3,500	200	-----	100	2,000	-----	-----	100	-----
- - - - -	1,400	-----	-----	-----	100	-----	-----	-----	-----
- - - - -	100	-----	-----	-----	-----	-----	-----	-----	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL  
NUMBER OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND

AREAS OF TECHNOLOGY	ELEC- TRICAL EQUIP- MENT, SERVICES	ELEC- TRONIC EQUIP- MENT, SERVICES	LAB., SCI., PHOTO., OPTICAL EQUIPMENT	MACHI- NEA EQUI
AREAS OF TECHNOLOGY, CONTINUED				
HEAT, LIGHT, APPL. PHYSICS - - - - -	400	1,300	400	1,
ACOUSTICS, SONICS - - - - -	-----	300	-----	-----
APPLIED PHYSICS - - - - -	-----	200	-----	-----
ASTRONOMY AND ASTROPHYSICS - - - - -	-----	-----	-----	-----
CRYOGENICS - - - - -	-----	-----	-----	-----
HEAT TRANSFER - - - - -	100	100	-----	1,
HIGH TEMPERATURE - - - - -	-----	-----	-----	-----
HOLOGRAPHY - - - - -	-----	-----	-----	-----
ILLUMINATION, LIGHTING - - - - -	200	-----	-----	-----
INSULATION, THERMAL - - - - -	-----	-----	-----	-----
OPTICS - - - - -	-----	100	100	-----
PHOTOGRAPHY - - - - -	-----	-----	100	-----
PHYSICS - - - - -	-----	100	-----	-----
PLASMAS - - - - -	-----	-----	-----	-----
RADIO ASTRONOMY - - - - -	-----	-----	-----	-----
SOLID STATE - - - - -	-----	400	-----	-----
THERMODYNAMICS - - - - -	-----	-----	-----	-----
THERMOPHYSICS - - - - -	-----	-----	-----	-----
ULTRASONICS - - - - -	-----	-----	-----	-----
UNDERWATER ACOUSTICS - - - - -	-----	200	-----	-----
NUCLEAR - - - - -	300	100	-----	-----
NUCLEAR ENGINEERING - - - - -	200	-----	-----	-----
NUCLEONICS - - - - -	-----	-----	-----	-----
POWER, NUCLEAR - - - - -	200	-----	-----	-----
RADIATION SAFETY - - - - -	-----	-----	-----	-----
RADIOACTIVITY - - - - -	-----	-----	-----	-----
ENGR. PROCESS, APPLICATION - - - - -	600	1,300	100	2
ASSEMBLY METHODS - - - - -	-----	100	-----	-----
CONTAINERIZING, PACKAGING - - - - -	-----	-----	-----	-----
DRILLING - - - - -	-----	-----	-----	-----
DRYING - - - - -	-----	-----	-----	-----
ENGINEERING - - - - -	500	800	100	1
FASTENING, JOINING - - - - -	-----	-----	-----	-----
FORMING, SHAPING - - - - -	-----	-----	-----	-----
MATERIAL HANDLING - - - - -	-----	-----	-----	-----
MILITARY APPLICATIONS - - - - -	-----	300	-----	-----
MINIATURIZATION - - - - -	-----	-----	-----	-----
PRESERVING - - - - -	-----	-----	-----	-----
PROCESSES - - - - -	-----	-----	-----	-----
REFINING - - - - -	-----	-----	-----	-----
SIZE REDUCTION - - - - -	-----	-----	-----	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND PRODUCTS OR SERVICES--CONTINUED

PRODUCTS OR SERVICES

ELEC- TRICAL EQUIP- MENT, SERVICES	ELEC- TRONIC EQUIP- MENT, SERVICES	LAB.,SCI., PHOTO., OPTICAL EQUIPMENT	MACHINERY, MECHANICAL EQUIPMENT	MARINE TRANS- PORTATION	MEDICAL, HEALTH SERVICES	METALS, BASIC (EXCEPT MINING)	METAL FABRICATED PRODUCTS	MINING
400	1,300	400	1,500	100	-----	100	300	-----
-----	300	-----	-----	-----	-----	-----	-----	-----
-----	200	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	100	-----	-----	-----	-----	-----
100	100	-----	1,000	-----	-----	-----	200	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----
200	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	100	100	-----	-----	-----	-----	-----	-----
-----	-----	100	-----	-----	-----	-----	-----	-----
-----	100	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	400	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	300	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	200	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----
300	100	-----	600	100	-----	-----	-----	-----
200	-----	-----	300	100	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----
200	-----	-----	200	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----
600	1,300	100	2,300	500	-----	600	700	300
-----	100	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	100	-----	-----	-----	-----	-----
-----	-----	-----	100	-----	-----	-----	-----	-----
500	800	100	1,300	400	-----	300	300	200
-----	-----	-----	-----	-----	-----	-----	100	-----
-----	-----	-----	-----	-----	-----	100	100	-----
-----	-----	-----	500	-----	-----	-----	-----	100
-----	300	-----	-----	100	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	100	-----	-----	100	-----	-----
-----	-----	-----	-----	-----	-----	100	-----	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL  
NUMBER OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY

AREAS OF TECHNOLOGY										PRODUCT			R
										MOTOR VEHICLE TRANS- PORTATION	ORDNANCE	PETROLEUM	T
AREAS OF TECHNOLOGY, CONTINUED													
HEAT, LIGHT, APPL. PHYSICS - - - - -										-----	100	200	-
ACOUSTICS, SONICS - - - - -										-----	-----	-----	-
APPLIED PHYSICS - - - - -										-----	-----	-----	-
ASTRONOMY AND ASTROPHYSICS - - - - -										-----	-----	-----	-
CRYOGENICS - - - - -										-----	-----	-----	-
HEAT TRANSFER - - - - -										-----	-----	-----	-
HIGH TEMPERATURE - - - - -										-----	-----	-----	-
HOLOGRAPHY - - - - -										-----	-----	-----	-
ILLUMINATION, LIGHTING - - - - -										-----	-----	-----	-
INSULATION, THERMAL - - - - -										-----	-----	-----	-
OPTICS - - - - -										-----	-----	-----	-
PHOTOGRAPHY - - - - -										-----	-----	-----	-
PHYSICS - - - - -										-----	-----	-----	-
PLASMAS - - - - -										-----	-----	-----	-
RADIO ASTRONOMY - - - - -										-----	-----	-----	-
SOLID STATE - - - - -										-----	-----	-----	-
THERMODYNAMICS - - - - -										-----	-----	-----	-
THERMOPHYSICS - - - - -										-----	-----	-----	-
ULTRASONICS - - - - -										-----	-----	-----	-
UNDERWATER ACOUSTICS - - - - -										-----	-----	-----	-
NUCLEAR - - - - -										-----	-----	-----	-
NUCLEAR ENGINEERING - - - - -										-----	-----	-----	-
NUCLEONICS - - - - -										-----	-----	-----	-
POWER, NUCLEAR - - - - -										-----	-----	-----	-
RADIATION SAFETY - - - - -										-----	-----	-----	-
RADIOACTIVITY - - - - -										-----	-----	-----	-
ENGR. PROCESS, APPLICATION - - - - -										200	500	5,000	-
ASSEMBLY METHODS - - - - -										-----	-----	-----	-
CONTAINERIZING, PACKAGING - - - - -										-----	-----	-----	-
DRILLING - - - - -										-----	-----	1,100	-
DRYING - - - - -										-----	-----	-----	-
ENGINEERING - - - - -										100	100	2,400	-
FASTENING, JOINING - - - - -										-----	-----	-----	-
FORMING, SHAPING - - - - -										-----	-----	-----	-
MATERIAL HANDLING - - - - -										-----	-----	-----	-
MILITARY APPLICATIONS - - - - -										-----	300	-----	-
MINIATURIZATION - - - - -										-----	-----	-----	-
PRESERVING - - - - -										-----	-----	-----	-
PROCESSES - - - - -										-----	-----	400	-
REFINING - - - - -										-----	-----	1,100	-
SIZE REDUCTION - - - - -										-----	-----	-----	-

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

NUMBER OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND PRODUCTS OR SERVICES--CONTINUED

TECHNOLOGY	PRODUCTS OR SERVICES						
	MOTOR VEHICLE TRANS- PORTATION	ORDNANCE	PETROLEUM	RAILWAY, RAPID TRANSIT	UTILITIES	OTHER PRODUCTS, SERVICES	NO REPORT OF PRODUCTS OR SERVICES
PHYSICS - - - - -	-----	100	200	-----	100	300	300
- - - - -	-----	-----	-----	-----	-----	-----	-----
SICS - - - - -	-----	-----	-----	-----	-----	-----	-----
- - - - -	-----	-----	-----	-----	-----	-----	-----
- - - - -	-----	-----	-----	-----	-----	100	100
- - - - -	-----	-----	-----	-----	-----	-----	-----
- - - - -	-----	-----	-----	-----	-----	-----	-----
- - - - -	-----	-----	-----	-----	-----	-----	-----
- - - - -	-----	-----	-----	-----	-----	-----	-----
- - - - -	-----	-----	-----	-----	-----	-----	-----
- - - - -	-----	-----	-----	-----	-----	-----	-----
- - - - -	-----	-----	-----	-----	-----	-----	100
- - - - -	-----	-----	-----	-----	-----	-----	-----
- - - - -	-----	-----	-----	-----	300	200	100
- - - - -	-----	-----	-----	-----	100	100	100
- - - - -	-----	-----	-----	-----	-----	-----	-----
- - - - -	-----	-----	-----	-----	200	-----	-----
- - - - -	-----	-----	-----	-----	-----	-----	-----
ATION - - - - -	200	500	5,000	100	700	900	1,600
- - - - -	-----	-----	-----	-----	-----	-----	-----
NG - - - - -	-----	-----	1,100	-----	-----	-----	-----
- - - - -	-----	-----	-----	-----	-----	-----	-----
- - - - -	100	100	2,400	100	700	400	1,100
- - - - -	-----	-----	-----	-----	-----	-----	-----
- - - - -	-----	300	-----	-----	-----	100	-----
- - - - -	-----	-----	-----	-----	-----	100	200
- - - - -	-----	-----	-----	-----	-----	-----	-----
- - - - -	-----	-----	400	-----	-----	200	100
- - - - -	-----	-----	1,100	-----	-----	-----	100
- - - - -	-----	-----	-----	-----	-----	-----	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL  
NUMBER OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND

AREAS OF TECHNOLOGY	TOTAL	AGRICUL- TURE & FOOD	AIRCRAFT & SPACE	CERAM
AREAS OF TECHNOLOGY, CONTINUED				
AUTOMATION AND CONTROL - - - - -	12,800	100	2,300	
ADAPTIVE SYSTEMS - - - - -	100			
AUTOMATION, CYBERNETICS - - - - -	500			
CONTROL (GENERAL) - - - - -	4,300		800	
GUIDANCE, STABILITY - - - - -	1,000		600	
INSTRUMENTATION - - - - -	5,700		600	
MEASUREMENT, METROLOGY - - - - -	500			
SERVO-MECHANISMS - - - - -	200		100	
TELEMETRY - - - - -	300		100	
WORK MGMT, EVALUATION - - - - -	58,100	1,100	7,600	
ARRANGEMENT - - - - -	100			
CONFIGURATION CONTROL - - - - -	300		200	
COST ENGINEERING - - - - -	2,500	100	100	
EQUIPMENT FACILITIES - - - - -	500			
FIRE PREVENTION - - - - -	800			
INDUSTRIAL ENGINEERING - - - - -	8,300	300	700	
MAINTAINABILITY, MAINTENANCE - - - - -	2,300		200	
MANUFACTURING TECHNOLOGY - - - - -	4,600	100	300	
MOTION AND TIME STUDY - - - - -	200			
NONDESTRUCTIVE TESTS - - - - -	1,100		100	
OPERATING PROCEDURES - - - - -	2,700		700	
OPERATIONS RESEARCH - - - - -	7,000	200	200	
PLANT AND FACILITIES ENGR. - - - - -	5,000		400	
PRODUCT ENGINEERING - - - - -	1,700			
PRODUCTION METHODS - - - - -	3,400	100	100	
PRODUCTION PLANNING, CONTROL - - - - -	1,200		300	
QUALITY ASSURANCE - - - - -	1,100			
QUALITY CONTROL - - - - -				
RADIOGRAPHY, X-RAYS - - - - -	900		300	
RELIABILITY - - - - -	600		100	
SAFETY ENGINEERING - - - - -	900			
SPECIFICATIONS, STANDARDS - - - - -	8,400		2,400	
SYSTEMS ENGINEERING - - - - -	1,900		900	
TESTING-ENVIRONMENTAL - - - - -	1,500		300	
TESTING-LABORATORY - - - - -	200			
TOOLING, TOOLS - - - - -	400		100	
VALUE ENGINEERING - - - - -	300			
WORK METHODS, SIMPLIFICATION - - - - -				

# NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND PRODUCTS OR SERVICES--CONTINUED

TECHNOLOGY	TOTAL	PRODUCTS OR SERVICES							
		AGRICUL- TURE & FOOD	AIRCRAFT & SPACE	CERAMICS	CHEMICALS & ALLIED PRODUCTS	COMMU- NICATIONS	COMPUTERS	CONSTRUC- TION & CIVIL ENGR	EDUCA- TIONAL, INFOR- MATION SERVICES
CONTINUED									
L	12,800	100	2,300	100	800	100	500	500	300
	100	-----	-----	-----	-----	-----	-----	-----	-----
	500	-----	-----	-----	-----	-----	100	-----	-----
	4,300	-----	800	-----	200	-----	200	300	200
	1,000	-----	600	-----	-----	-----	-----	-----	-----
	5,700	-----	600	-----	500	-----	100	200	100
	500	-----	-----	-----	-----	-----	-----	-----	-----
	200	-----	100	-----	-----	-----	-----	-----	-----
	300	-----	100	-----	-----	-----	-----	-----	-----
	58,100	1,100	7,600	500	5,600	1,300	2,300	5,300	1,300
	100	-----	-----	-----	-----	-----	-----	-----	-----
	300	-----	200	-----	-----	-----	-----	-----	-----
	2,500	100	100	-----	300	-----	-----	800	-----
	500	-----	-----	-----	100	-----	-----	100	-----
	800	-----	-----	-----	100	-----	-----	100	-----
	8,300	300	700	200	500	200	200	400	600
NCE	2,300	-----	200	-----	300	-----	-----	400	-----
	4,600	100	300	100	1,200	-----	200	100	100
	200	-----	-----	-----	-----	-----	-----	-----	-----
	1,100	-----	100	-----	100	-----	-----	100	-----
	2,700	-----	700	-----	100	100	300	100	300
R.	7,000	200	200	100	1,200	100	-----	1,800	100
	5,000	-----	400	-----	300	100	100	100	-----
	1,700	-----	-----	-----	200	-----	-----	-----	-----
ROL	3,400	100	100	-----	800	-----	-----	300	-----
	1,200	-----	300	-----	100	-----	-----	100	-----
	1,100	-----	-----	-----	100	-----	-----	200	-----
	900	-----	300	-----	-----	-----	200	-----	-----
	600	-----	100	-----	-----	-----	-----	100	-----
	900	-----	-----	-----	-----	-----	-----	300	-----
	8,400	-----	2,400	-----	100	500	900	200	100
	1,900	-----	900	-----	-----	-----	100	-----	-----
	1,500	-----	300	-----	-----	-----	-----	100	-----
	200	-----	-----	-----	-----	-----	-----	-----	-----
	400	-----	100	-----	-----	-----	-----	-----	-----
ON	300	-----	-----	-----	-----	-----	-----	-----	-----



NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND PRODUCTS

AREAS OF TECHNOLOGY	ELEC- TRICAL EQUIP- MENT, SERVICES	ELEC- TRONIC EQUIP- MENT, SERVICES	LAB.,SCI., PHOTO., OPTICAL EQUIPMENT	MACHINERY, MECHANICAL EQUIPMENT
AREAS OF TECHNOLOGY, CONTINUED				
AUTOMATION AND CONTROL - - - - -	1,700	2,400	900	800
ADAPTIVE SYSTEMS - - - - -	-----	-----	-----	-----
AUTOMATION, CYBERNETICS - - - - -	100	100	-----	100
CONTROL (GENERAL) - - - - -	800	500	100	400
GUIDANCE, STABILITY - - - - -	-----	200	-----	-----
INSTRUMENTATION - - - - -	700	1,400	800	200
MEASUREMENT, METROLOGY - - - - -	100	200	100	-----
SERVO-MECHANISMS - - - - -	-----	100	-----	-----
TELEMETRY - - - - -	-----	100	-----	-----
WORK MGMT, EVALUATION - - - - -	2,800	4,900	400	5,300
ARRANGEMENT - - - - -	-----	-----	-----	-----
CONFIGURATION CONTROL - - - - -	-----	-----	-----	-----
COST ENGINEERING - - - - -	100	100	-----	100
EQUIPMENT FACILITIES - - - - -	-----	-----	-----	100
FIRE PREVENTION - - - - -	-----	-----	-----	-----
INDUSTRIAL ENGINEERING - - - - -	400	400	100	700
MAINTAINABILITY, MAINTENANCE - - - - -	100	100	-----	300
MANUFACTURING TECHNOLOGY - - - - -	300	400	-----	600
MOTION AND TIME STUDY - - - - -	-----	-----	-----	-----
NONDESTRUCTIVE TESTS - - - - -	-----	-----	-----	-----
OPERATING PROCEDURES - - - - -	-----	-----	-----	-----
OPERATIONS RESEARCH - - - - -	100	100	-----	100
PLANT AND FACILITIES ENGR. - - - - -	200	100	-----	800
PRODUCT ENGINEERING - - - - -	700	500	-----	1,400
PRODUCTION METHODS - - - - -	-----	100	-----	100
PRODUCTION PLANNING, CONTROL - - - - -	100	100	-----	100
QUALITY ASSURANCE - - - - -	100	200	-----	-----
QUALITY CONTROL - - - - -	100	100	-----	100
RADIOGRAPHY, X-RAYS - - - - -	-----	-----	-----	-----
RELIABILITY - - - - -	-----	200	-----	-----
SAFETY ENGINEERING - - - - -	-----	-----	-----	-----
SPECIFICATIONS, STANDARDS - - - - -	-----	200	-----	-----
SYSTEMS ENGINEERING - - - - -	300	1,800	100	300
TESTING-ENVIRONMENTAL - - - - -	100	200	-----	200
TESTING-LABORATORY - - - - -	100	100	100	200
TOOLING, TOOLS - - - - -	-----	-----	-----	100
VALUE ENGINEERING - - - - -	-----	-----	-----	-----
WORK METHODS, SIMPLIFICATION - - - - -	-----	-----	-----	-----



NATIONAL REGISTER OF SCIENTIFIC A  
NUMBER OF ENGINEERS MEETING CRITERIA BY AREAS OF T

AREAS OF TECHNOLOGY	MOTOR VEHICLE TRANS- PORTATION	ORDNANCE	PETR
AREAS OF TECHNOLOGY, CONTINUED			
AUTOMATIC AND CONTROL - - - - -	100	300	
ADAPTIVE SYSTEMS - - - - -	-----	-----	--
AUTOMATION, CYBERNETICS - - - - -	-----	-----	--
CONTROL (GENERAL) - - - - -	-----	100	--
GUIDANCE, STABILITY - - - - -	-----	200	--
INSTRUMENTATION - - - - -	-----	100	--
MEASUREMENT, METROLOGY - - - - -	-----	-----	--
SERVO-MECHANISMS - - - - -	-----	-----	--
TELEMETRY - - - - -	-----	-----	--
WORK MGMT, EVALUATION - - - - -	900	2,000	3
ARRANGEMENT - - - - -	-----	-----	--
CONFIGURATION CONTROL - - - - -	-----	100	--
COST ENGINEERING - - - - -	-----	100	--
EQUIPMENT FACILITIES - - - - -	-----	-----	--
FIRE PREVENTION - - - - -	-----	-----	--
INDUSTRIAL ENGINEERING - - - - -	200	200	--
MAINTAINABILITY, MAINTENANCE - - - - -	-----	100	--
MANUFACTURING TECHNOLOGY - - - - -	100	-----	--
MOTION AND TIME STUDY - - - - -	-----	-----	--
NONDESTRUCTIVE TESTS - - - - -	-----	-----	--
OPERATING PROCEDURES - - - - -	-----	-----	--
OPERATIONS RESEARCH - - - - -	-----	200	--
PLANT AND FACILITIES ENGR. - - - - -	100	100	--
PRODUCT ENGINEERING - - - - -	200	100	--
PRODUCTION METHODS - - - - -	-----	-----	--
PRODUCTION PLANNING, CONTROL - - - - -	-----	-----	--
QUALITY ASSURANCE - - - - -	-----	100	--
QUALITY CONTROL - - - - -	-----	-----	--
RADIOGRAPHY, X-RAYS - - - - -	-----	-----	--
RELIABILITY - - - - -	-----	100	--
SAFETY ENGINEERING - - - - -	-----	-----	--
SPECIFICATIONS, STANDARDS - - - - -	-----	-----	--
SYSTEMS ENGINEERING - - - - -	-----	700	--
TESTING-ENVIRONMENTAL - - - - -	-----	200	--
TESTING-LABORATORY - - - - -	100	100	--
TOOLING, TOOLS - - - - -	-----	-----	--
VALUE ENGINEERING - - - - -	-----	-----	--
WORK METHODS, SIMPLIFICATION - - - - -	-----	-----	--

## R OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND PRODUCTS OR SERVICES--CONTINUED

## TECHNOLOGY

CON

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND PROFESSION

P

AREAS OF TECHNOLOGY	TOTAL	AGRICUL- TURE & FOOD	AIRCRAFT & SPACE	CERAMICS
AREAS OF TECHNOLOGY, CONTINUED				
INFORMATION, MATHEMATICS - - - - -	11,700	-----	1,400	-----
COMPUTER APPLICATIONS - - - - -	5,900	-----	400	-----
DATA PROCESSING - - - - -	1,100	-----	100	-----
DISPLAY - - - - -	400	-----	-----	-----
DRAFTING, DRAWING, GRAPHICS - - - - -	900	-----	100	-----
INFORMATION RETRIEVAL - - - - -	200	-----	-----	-----
INFORMATION THEORY - - - - -	100	-----	-----	-----
LOGIC - - - - -	300	-----	-----	-----
MATHEMATICS - - - - -	400	-----	-----	-----
NEURAL NETS - - - - -	-----	-----	-----	-----
REPROGRAPHY - - - - -	-----	-----	-----	-----
STATISTICS - - - - -	200	-----	-----	-----
STRESS ANALYSIS - - - - -	1,900	-----	700	-----
OTHER - - - - -	10,100	300	1,300	100
NO REPORT - - - - -	5,300	-----	300	-----

IONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969  
 MEETING CRITERIA BY AREAS OF TECHNOLOGY AND PRODUCTS OR SERVICES--CONTINUED

PRODUCTS OR SERVICES									
TOTAL	AGRICUL- TURE & FOOD	AIRCRAFT & SPACE	CERAMICS	CHEMICALS & ALLIED PRODUCTS	COMMU- NICATIONS	COMPUTERS	CONSTRUC- TION & CIVIL ENGR	EDUCA- TIONAL, INFOR- MATION SERVICES	
11,700	-----	1,400	-----	300	200	5,100	700	1,000	
5,900	-----	400	-----	200	200	3,800	200	200	
1,100	-----	100	-----	-----	-----	800	-----	-----	
400	-----	-----	-----	-----	-----	100	-----	-----	
900	-----	100	-----	-----	-----	-----	200	300	
200	-----	-----	-----	-----	-----	-----	-----	100	
100	-----	-----	-----	-----	-----	-----	-----	-----	
300	-----	-----	-----	-----	-----	200	-----	-----	
400	-----	-----	-----	-----	-----	100	-----	200	
-----	-----	-----	-----	-----	-----	-----	-----	-----	
-----	-----	-----	-----	-----	-----	-----	-----	-----	
200	-----	-----	-----	-----	-----	-----	-----	-----	
1,900	-----	700	-----	-----	-----	-----	300	200	
10,100	300	1,300	100	1,000	200	200	1,400	500	
5,300	-----	300	-----	200	100	100	800	200	

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL  
NUMBER OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY

AREAS OF TECHNOLOGY	ELEC- TRICAL EQUIP- MENT, SERVICES	ELEC- TRONIC EQUIP- MENT, SERVICES	LAB.,SCI., M PHOTO., M OPTICAL EQUIPMENT
AREAS OF TECHNOLOGY, CONTINUED			
INFORMATION, MATHEMATICS - - - - -	200	700	100
COMPUTER APPLICATIONS - - - - -	100	200	-----
DATA PROCESSING - - - - -	-----	100	-----
DISPLAY - - - - -	-----	300	-----
DRAFTING, DRAWING, GRAPHICS - - - - -	-----	-----	-----
INFORMATION RETRIEVAL - - - - -	-----	-----	-----
INFORMATION THEORY - - - - -	-----	-----	-----
LOGIC - - - - -	-----	-----	-----
MATHEMATICS - - - - -	-----	-----	-----
NEURAL NETS - - - - -	-----	-----	-----
REPROGRAPHY - - - - -	-----	-----	-----
STATISTICS - - - - -	-----	-----	-----
STRESS ANALYSIS - - - - -	-----	-----	-----
OTHER - - - - -	300	400	100
NO REPORT - - - - -	300	200	-----

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ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND PRODUCTS OR SERVICES--CONTINUED

PRODUCTS OR SERVICES

LOGY

	ELEC- TRICAL EQUIP- MENT, SERVICES	ELEC- TRONIC EQUIP- MENT, SERVICES	LAB.,SCI., PHOTO., OPTICAL EQUIPMENT	MACHINERY, MECHANICAL EQUIPMENT	MARINE TRANS- PORTATION	MEDICAL, HEALTH SERVICES	METALS, BASIC (EXCEPT MINING)	METAL FABRICATED PRODUCTS	MINING
--	--	--	---	---------------------------------------	-------------------------------	--------------------------------	--	---------------------------------	--------

UED

- - - - -	200	700	100	400	100	-----	100	100	-----
- - - - -	100	200	-----	100	-----	-----	100	-----	-----
- - - - -	-----	100	-----	-----	-----	-----	-----	-----	-----
- - - - -	-----	300	-----	-----	-----	-----	-----	-----	-----
- - - - -	-----	-----	-----	100	-----	-----	-----	-----	-----
- - - - -	-----	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	-----	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	-----	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	-----	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	-----	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	-----	-----	-----	-----	-----	-----	-----	-----	-----
- - - - -	-----	-----	-----	200	100	-----	-----	100	-----
- - - - -	300	400	100	700	200	-----	100	100	100
- - - - -	300	200	-----	500	100	-----	100	100	100



NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND

PRODUCTS OR SERVICES

AREAS OF TECHNOLOGY

MOTOR  
VEHICLE  
TRANS-  
PORTATION      ORDNANCE      PETROLEUM      RAILWAY  
RAPID  
TRANSIT

AREAS OF TECHNOLOGY, CONTINUED

INFORMATION, MATHEMATICS - - - - -	100	100	400	100
COMPUTER APPLICATIONS - - - - -	-----	-----	200	-----
DATA PROCESSING - - - - -	-----	-----	-----	-----
DISPLAY - - - - -	-----	-----	-----	-----
DRAFTING, DRAWING, GRAPHICS - - - - -	-----	-----	-----	-----
INFORMATION RETRIEVAL - - - - -	-----	-----	-----	-----
INFORMATION THEORY - - - - -	-----	-----	-----	-----
LOGIC - - - - -	-----	-----	-----	-----
MATHEMATICS - - - - -	-----	-----	100	-----
NEURAL NETS - - - - -	-----	-----	-----	-----
REPROGRAPHY - - - - -	-----	-----	-----	-----
STATISTICS - - - - -	-----	-----	-----	-----
STRESS ANALYSIS - - - - -	-----	-----	-----	-----
OTHER - - - - -	-----	200	1,000	-----
NO REPORT - - - - -	-----	-----	300	-----

NOTE - GROUPS MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.

ANNUAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969  
 MEETING CRITERIA BY AREAS OF TECHNOLOGY AND PRODUCTS OR SERVICES--CONTINUED

PRODUCTS OR SERVICES

MOTOR VEHICLE TRANS- PORTATION	ORDNANCE	PETROLEUM	RAILWAY, RAPID TRANSIT	UTILITIES	OTHER PRODUCTS, SERVICES	NO REPORT OF PRODUCTS OR SERVICES
100	100	400	100	200	200	300
-----	-----	200	-----	100	100	100
-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	100
-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----
-----	-----	100	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	100
-----	200	1,000	-----	400	1,100	400
-----	-----	300	-----	200	200	1,200

USE OF ROUNDING.

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND HIGHEST

HIGHEST DEGREE CURRICULUM

AREAS OF TECHNOLOGY	TOTAL	AERO- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL	GENERAL
ALL AREAS OF TECHNOLOGY - - -	308,000	13,100	26,600	48,600	65,500	26,300
BIDMEDICAL - - - - -	1,700	100	300	200	300	100
AQUACULTURE - - - - -	100	---	---	---	---	---
BIOCHEMISTRY - - - - -	700	---	200	---	100	---
BIOENGINEERING - - - - -	100	---	---	---	---	---
BIOLOGICAL APPLICATIONS - - - - -	100	---	---	---	---	---
BIOMECHANICS - - - - -	100	---	---	---	100	---
BIONICS, MEDICAL ELECTRONICS - - - - -	100	---	---	---	---	---
HEALTH PHYSICS - - - - -	100	---	---	---	---	---
INDUSTRIAL HEALTH - - - - -	100	---	---	---	---	---
LIFE SUPPORT - - - - -	200	---	---	---	100	---
MEDICAL APPLICATIONS - - - - -	200	---	---	---	---	---
PHYSIOLOGY - - - - -	200	---	---	100	---	---
PUBLIC HEALTH - - - - -	200	---	---	---	---	---
BEHAVIORAL AND SOCIAL - - - - -	4,300	100	800	400	500	300
ECONOMICS - - - - -	1,900	---	500	100	100	100
EDUCATIONAL TECHNOLOGY - - - - -	2,000	---	200	300	300	200
HISTORY (TECHNOLOGICAL) - - - - -	100	---	---	---	---	---
HUMAN FACTORS - - - - -	300	---	---	---	---	---
PSYCHOLOGY - - - - -	300	---	---	---	---	---
CHEMICAL AND MATERIALS - - - - -	12,400	300	5,100	600	500	800
CHEMICAL APPLICATIONS - - - - -	4,800	---	3,500	100	100	100
COMBUSTION, FUELS - - - - -	1,000	100	200	---	100	---
COATING, PLATING, CLADDING - - - - -	400	---	200	---	---	---
CORROSION - - - - -	400	---	200	---	---	---
CRYSTALS, CRYSTALLOGRAPHY - - - - -	100	---	---	---	---	---
ELECTROCHEMISTRY - - - - -	300	---	200	---	---	---
FILAMENT TECHNOLOGY - - - - -	200	---	100	---	---	---
FUEL CELLS - - - - -	100	---	---	---	---	---
MATERIAL APPLICATIONS - - - - -	3,600	100	500	400	200	300
MATERIAL PROPERTIES - - - - -	1,400	---	200	100	---	300
THERMOCHEMISTRY - - - - -	100	---	---	---	---	---
METALLURGICAL - - - - -	12,900	100	1,100	200	200	700
BENEFICIATION, ORE PROCESS. - - - - -	600	---	100	100	---	---
CASTING - - - - -	400	---	100	---	---	---
METALLURGY (GENERAL) - - - - -	4,300	100	300	100	100	300
METALLURGY, EXTRACTIVE - - - - -	1,200	---	200	---	---	---
METALLURGY, PHYSICAL - - - - -	3,000	---	100	---	---	200
METALLURGY, POWDER - - - - -	400	---	---	---	---	---
METALLURGY, PROCESS - - - - -	2,300	---	300	---	---	100
WELDING - - - - -	600	---	---	100	100	---

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 ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND HIGHEST DEGREE CURRICULA GROUPS

TOTAL	HIGHEST DEGREE CURRICULA GROUPS									
	AERO- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL	GENERAL	MECHAN- ICAL	METAL- LURGICAL	MINERAL	OTHER	NO REPORT OF CUR- RICULUM
308,000	13,100	26,600	48,600	65,500	26,300	58,500	12,800	15,400	34,300	6,800
1,700	100	300	200	300	100	200	-----	-----	500	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
700	-----	200	-----	100	-----	100	-----	-----	200	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	100	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	100	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	-----	-----	-----	100	-----	-----	-----	-----	-----	-----
200	-----	-----	100	-----	-----	-----	-----	-----	-----	-----
4,300	100	800	400	500	300	500	100	500	1,000	-----
1,900	-----	500	100	100	100	100	-----	400	400	-----
2,000	-----	200	300	300	200	300	100	100	500	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
300	-----	-----	-----	-----	-----	-----	-----	-----	100	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
12,400	300	5,100	600	500	800	1,600	1,600	300	1,500	200
4,800	-----	3,500	100	100	100	200	100	200	600	-----
1,000	100	200	-----	100	-----	400	-----	-----	100	100
400	-----	200	-----	-----	-----	100	-----	-----	-----	-----
400	-----	200	-----	-----	-----	-----	100	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
300	-----	200	-----	-----	-----	-----	-----	-----	-----	-----
200	-----	100	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3,600	100	500	400	200	300	600	900	-----	500	100
1,400	-----	200	100	-----	300	200	400	-----	100	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
12,900	100	1,100	200	200	700	600	8,400	600	700	100
600	-----	100	100	-----	-----	-----	200	200	-----	-----
400	-----	100	-----	-----	-----	100	200	-----	-----	-----
4,300	100	300	100	100	300	200	2,900	100	200	100
1,200	-----	200	-----	-----	-----	100	600	200	100	-----
3,000	-----	100	-----	-----	200	-----	2,500	-----	100	-----
400	-----	-----	-----	-----	-----	-----	200	-----	-----	-----
-----	-----	300	-----	-----	100	100	1,600	100	100	-----
-----	-----	-----	100	100	-----	100	200	-----	-----	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 196  
NUMBER OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND HIGHEST DEGREE CUR

AREAS OF TECHNOLOGY		TOTAL	AERO- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL	GENERAL	MECHA- ICAL
AREAS OF TECHNOLOGY, CONTINUED								
EARTH, ATMOSPHERE, MARINE	- - -	10,800	100	200	1,600	500	300	800
ATMOSPHERIC SCIENCES	- - - - -	200	-----	-----	-----	-----	-----	-----
DESALTING	- - - - -	200	-----	-----	-----	-----	-----	100
EARTH SCIENCES	- - - - -	900	-----	-----	200	-----	-----	100
GEOCHEMISTRY	- - - - -	100	-----	-----	-----	-----	-----	-----
GEODESY	- - - - -	100	-----	-----	-----	-----	-----	-----
GEOLOGY	- - - - -	2,700	-----	-----	-----	-----	-----	-----
GEOPHYSICS	- - - - -	400	-----	-----	-----	-----	-----	-----
HYDROGRAPHY	- - - - -	-----	-----	-----	-----	100	-----	-----
HYDROLOGY	- - - - -	1,000	-----	-----	700	-----	-----	-----
MARINE SCIENCES	- - - - -	900	-----	-----	100	-----	100	300
MINING, SURFACE	- - - - -	1,300	-----	-----	100	-----	-----	-----
MINING, UNDERGROUND	- - - - -	1,900	-----	100	100	-----	-----	-----
MINING, UNDERWATER	- - - - -	100	-----	-----	-----	-----	-----	-----
OCEANOGRAPHY	- - - - -	300	-----	-----	-----	100	-----	-----
OFFSHORE OPERATIONS	- - - - -	600	-----	-----	200	-----	-----	100
UNDERWATER TECHNOLOGY	- - - - -	200	-----	-----	-----	100	-----	100
ENVIRONMENTAL, STRUCTURAL								
AIR POLLUTION	- - - - -	35,900	1,100	1,000	22,600	900	1,500	3,700
CONCRETE TECHNOLOGY	- - - - -	900	-----	200	100	100	100	300
CONSERVATION, RECLAMATION	- - - - -	1,400	-----	-----	1,100	-----	-----	-----
DRAINAGE, IRRIGATION	- - - - -	700	-----	-----	300	-----	-----	-----
ENVIRONMENTAL CONTROL	- - - - -	900	-----	-----	400	-----	-----	-----
ENVIRONMENTAL CONTROL	- - - - -	3,500	100	100	400	200	300	1,700
ENVIRONMENTAL FACTORS	- - - - -	300	-----	100	-----	100	-----	-----
NOISE REDUCTION	- - - - -	200	-----	-----	-----	-----	-----	100
PHOTOGRAMMETRY	- - - - -	100	-----	-----	100	-----	-----	-----
POLLUTION	- - - - -	300	-----	100	100	-----	-----	-----
PUBLIC SAFETY	- - - - -	200	-----	-----	100	-----	-----	-----
ROCK MECHANICS	- - - - -	200	-----	-----	-----	-----	-----	-----
SANITARY ENGINEERING	- - - - -	2,900	-----	100	2,400	-----	100	100
SOILS	- - - - -	1,600	-----	-----	1,200	-----	-----	-----
SOLID WASTE	- - - - -	100	-----	-----	100	-----	-----	-----
STRUCTURES	- - - - -	13,300	700	100	9,800	100	700	700
SURVEYING, MAPPING	- - - - -	900	-----	-----	600	-----	-----	-----
TRAFFIC	- - - - -	500	-----	-----	400	-----	-----	-----
TRANSPORTATION	- - - - -	3,800	100	100	2,700	200	100	200
WASTE DISPOSAL	- - - - -	500	-----	100	200	-----	-----	-----
WATER POLLUTION	- - - - -	900	-----	200	500	-----	-----	100
WATER SOURCES AND SUPPLY	- - - - -	2,700	-----	100	1,900	-----	100	100

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND HIGHEST DEGREE CURRICULA GROUPS--CONTINUED

## HIGHEST DEGREE CURRICULA GROUPS

TOTAL	AERO- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL	GENERAL	MECHAN- ICAL	METAL- LURGICAL	MINERAL	OTHER	NO REPORT OF CUR- RICULUM
10,800	100	200	1,600	500	300	800	100	5,700	1,300	100
200										
200						100				
900			200			100		500	100	
100										
100										
2,700								2,500	100	
400				100				100	100	
1,000			700						200	
900			100		100	300			400	
1,300			100					900	100	
1,900		100	100				100	1,400	100	
100										
300				100					100	
600			200			100		100	100	
200				100		100			100	
35,900	1,100	1,000	22,600	900	1,500	3,700	100	600	3,300	1,000
900		200	100	100	100	300			100	
1,400			1,100						100	
700			300					100	300	
900			400						400	
3,500	100	100	400	200	300	1,700			400	200
300		100		100					100	
200						100				
100			100							
300		100	100							
200			100							
200								100		
2,900		100	2,400		100	100			100	100
1,600			1,200						200	
100			100							
13,300	700	100	9,800	100	700	700			800	300
900			600					100	100	100
500			400							
3,800	100	100	2,700	200	100	200			300	100
500		100	200							
900		200	500			100			100	
2,700		100	1,900		100	100		100	300	100

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL  
NUMBER OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND HIGHEST DEGREE

AREAS OF TECHNOLOGY	TOTAL	AERO- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL
AREAS OF TECHNOLOGY, CONTINUED					
ELECTROMAGNETIC - - - - -	44,800	500	300	700	33,600
CIRCUITS, NETWORKS - - - - -	1,300	-----	-----	-----	1,100
COMMUNICATION - - - - -	4,200	-----	-----	100	3,100
DIELECTRICS - - - - -	100	-----	-----	-----	100
ELECTRICAL APPLICATIONS - - - - -	4,300	100	-----	100	3,000
ELECTRICAL ENGINEERING - - - - -	16,200	100	100	-----	13,900
ELECTROMAGNETIC RADIATION - - - - -	900	-----	-----	-----	700
ELECTROMECHANICAL TECH. - - - - -	1,500	100	-----	-----	600
ELECTRONIC APPLICATIONS - - - - -	6,900	100	-----	100	5,000
INFRA-RED, RADICMETRY - - - - -	200	-----	-----	-----	100
INSULATION, ELECTRICAL - - - - -	200	-----	-----	-----	100
MAGNETICS, MAGNETISM - - - - -	400	-----	-----	-----	200
NAVIGATION - - - - -	800	-----	-----	-----	500
PHOTOELECTRICITY - - - - -	100	-----	-----	-----	-----
POWER, ELECTRICAL - - - - -	5,300	-----	-----	300	3,500
RADIO FREQ. COMPATIBILITY - - - - -	100	-----	-----	-----	100
RECORDING - - - - -	100	-----	-----	-----	100
SUPERCONDUCTIVITY - - - - -	-----	-----	-----	-----	-----
TELECOMMUNICATIONS - - - - -	2,100	-----	-----	-----	1,500
DYNAMICS AND MECHANICS - - - - -					
AERODYNAMICS - - - - -	42,200	5,200	1,600	2,500	1,800
ASTRODYNAMICS - - - - -	4,300	2,800	-----	100	100
ENERGY GEN. AND CONVERSION - - - - -	700	400	-----	-----	100
EXPLOSIVE EFFECTS - - - - -	1,500	-----	-----	100	600
FLUID DYNAMICS, MECHANICS - - - - -	200	-----	100	-----	-----
FLUIDICS - - - - -	2,500	500	300	200	-----
FRICTION - - - - -	200	-----	-----	-----	-----
GAS DYNAMICS - - - - -	100	-----	-----	-----	-----
HIGH PRESSURE - - - - -	500	100	-----	-----	-----
HYDRAULICS - - - - -	100	-----	-----	-----	-----
HYDRODYNAMICS - - - - -	2,200	-----	-----	1,100	100
KINETICS - - - - -	300	-----	-----	-----	-----
LUBRICATION - - - - -	300	-----	200	-----	-----
MAGNETOHYDRODYNAMICS - - - - -	300	-----	-----	-----	-----
MASS TRANSFER - - - - -	100	-----	-----	-----	-----
MECHANICAL APPLICATIONS - - - - -	400	-----	300	-----	-----
MECHANICAL ENGINEERING - - - - -	3,700	100	100	200	100
MECHANICS - - - - -	19,200	500	100	400	500
POWER, MECHANICAL - - - - -	1,400	100	-----	200	-----
PROPULSION - - - - -	1,400	-----	-----	100	100
VACUUM TECHNOLOGY - - - - -	2,700	600	300	-----	-----
	200	-----	-----	-----	-----

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NEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND HIGHEST DEGREE CURRICULA GROUPS--CONTINUED

HIGHEST DEGREE CURRICULA GROUPS

	TOTAL	AERO- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL	GENERAL	MECHAN- ICAL	METAL- LURGICAL	MINERAL	OTHER	NO REPORT OF CUR- RICULUM
UUED											
- - -	44,800	500	300	700	33,600	1,800	2,600	100	100	3,700	1,400
- - -	1,300	-----	-----	-----	1,100	100	-----	-----	-----	100	-----
- - -	4,200	-----	-----	100	3,100	200	200	-----	-----	400	100
- - -	100	-----	-----	-----	100	-----	-----	-----	-----	-----	-----
- - -	4,300	100	-----	100	3,000	200	300	-----	-----	400	200
- - -	16,200	100	100	-----	13,900	400	400	-----	-----	800	500
- - -	900	-----	-----	-----	700	-----	-----	-----	-----	100	-----
- - -	1,500	100	-----	-----	600	100	400	-----	-----	200	100
- - -	6,900	100	-----	100	5,000	400	300	-----	-----	900	200
- - -	200	-----	-----	-----	100	-----	-----	-----	-----	-----	-----
- - -	200	-----	-----	-----	100	-----	-----	-----	-----	-----	-----
- - -	400	-----	-----	-----	200	-----	-----	-----	-----	100	-----
- - -	800	-----	-----	-----	500	-----	100	-----	-----	100	-----
- - -	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
- - -	5,300	-----	-----	300	3,500	200	800	-----	-----	300	200
- - -	100	-----	-----	-----	100	-----	-----	-----	-----	-----	-----
- - -	100	-----	-----	-----	100	-----	-----	-----	-----	-----	-----
- - -	2,100	-----	-----	-----	1,500	100	100	-----	-----	300	100
- - -	42,200	5,200	1,600	2,500	1,800	4,100	21,900	200	600	3,400	1,000
- - -	4,300	2,800	-----	100	100	200	800	-----	-----	300	-----
- - -	700	400	-----	-----	100	100	100	-----	-----	100	-----
- - -	1,500	-----	-----	100	600	100	500	-----	-----	100	-----
- - -	200	-----	100	-----	-----	-----	-----	-----	-----	-----	-----
- - -	2,500	500	300	200	-----	300	800	-----	200	200	-----
- - -	200	-----	-----	-----	-----	-----	100	-----	-----	-----	-----
- - -	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
- - -	500	100	-----	-----	-----	-----	200	-----	-----	-----	-----
- - -	100	-----	-----	-----	-----	-----	100	-----	-----	-----	-----
- - -	2,200	-----	-----	1,100	100	100	600	-----	-----	200	-----
- - -	300	-----	-----	-----	-----	-----	100	-----	-----	100	-----
- - -	300	-----	200	-----	-----	-----	-----	-----	-----	-----	-----
- - -	300	-----	-----	-----	-----	-----	200	-----	-----	-----	-----
- - -	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
- - -	400	-----	300	-----	-----	-----	-----	-----	-----	-----	-----
- - -	3,700	100	100	200	100	700	1,800	100	-----	400	200
- - -	19,200	500	100	400	500	1,500	14,100	100	200	1,300	700
- - -	1,400	100	-----	200	-----	700	300	-----	-----	100	-----
- - -	1,400	-----	-----	100	100	100	1,000	-----	-----	100	-----
- - -	2,700	600	300	-----	-----	200	1,100	-----	-----	300	-----
- - -	200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----



NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1960  
NUMBER OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND HIGHEST DEGREE CURRICULUM

AREAS OF TECHNOLOGY		TOTAL	AERO- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL	GENERAL	MECHA- ICAL
AREAS OF TECHNOLOGY, CONTINUED								
HEAT, LIGHT, APPL. PHYSICS	- - -	8,800	400	1,000	200	1,500	900	3,200
ACOUSTICS, SONICS	- - - - -	600	-----	-----	-----	200	100	100
APPLIED PHYSICS	- - - - -	600	-----	-----	-----	200	100	100
ASTRONOMY AND ASTROPHYSICS	- - -	100	-----	-----	-----	-----	-----	-----
CRYOGENICS	- - - - -	500	-----	100	-----	-----	-----	200
HEAT TRANSFER	- - - - -	2,800	100	400	-----	100	200	1,700
HIGH TEMPERATURE	- - - - -	100	-----	-----	-----	-----	-----	-----
HOLOGRAPHY	- - - - -	-----	-----	-----	-----	-----	-----	-----
ILLUMINATION, LIGHTING	- - - - -	300	-----	-----	-----	200	-----	-----
INSULATION, THERMAL	- - - - -	100	-----	-----	-----	-----	-----	100
OPTICS	- - - - -	300	-----	-----	-----	100	-----	100
PHOTOGRAPHY	- - - - -	300	-----	100	-----	100	-----	-----
PHYSICS	- - - - -	500	-----	-----	-----	100	100	-----
PLASMAS	- - - - -	200	100	-----	-----	-----	-----	-----
RADIO ASTRONOMY	- - - - -	-----	-----	-----	-----	-----	-----	-----
SOLID STATE	- - - - -	500	-----	-----	-----	300	100	-----
THERMODYNAMICS	- - - - -	1,300	100	200	-----	-----	100	700
THERMOPHYSICS	- - - - -	100	-----	-----	-----	-----	-----	-----
ULTRASONICS	- - - - -	100	-----	-----	-----	-----	-----	-----
UNDERWATER ACOUSTICS	- - - - -	200	-----	-----	-----	200	-----	-----
NUCLEAR	- - - - -	2,600	100	400	100	400	100	900
NUCLEAR ENGINEERING	- - - - -	1,500	-----	300	100	100	100	400
NUCLEONICS	- - - - -	200	-----	-----	-----	100	-----	-----
POWER, NUCLEAR	- - - - -	800	-----	100	-----	100	-----	400
RADIATION SAFETY	- - - - -	100	-----	-----	-----	-----	-----	-----
RADIOACTIVITY	- - - - -	-----	-----	-----	-----	-----	-----	-----
ENGR. PROCESS, APPLICATION	- - -	33,600	1,000	5,700	9,500	3,000	1,700	4,400
ASSEMBLY METHODS	- - - - -	300	-----	-----	-----	-----	100	100
CONTAINERIZING, PACKAGING	- - - - -	200	-----	-----	-----	-----	-----	100
DRILLING	- - - - -	1,400	-----	100	100	-----	-----	200
DRYING	- - - - -	200	-----	100	-----	-----	-----	-----
ENGINEERING	- - - - -	22,800	800	2,300	8,600	2,200	1,100	2,700
FASTENING, JOINING	- - - - -	200	-----	-----	-----	-----	-----	100
FORMING, SHAPING	- - - - -	300	-----	-----	-----	-----	-----	100
MATERIAL HANDLING	- - - - -	1,100	-----	-----	100	100	100	400
MILITARY APPLICATIONS	- - - - -	2,100	200	100	500	500	100	300
MINIATURIZATION	- - - - -	-----	-----	-----	-----	-----	-----	-----
PRESERVING	- - - - -	-----	-----	-----	-----	-----	-----	-----
PROCESSES	- - - - -	3,500	-----	2,500	100	100	100	300
REPRODUCTION	- - - - -	1,400	-----	700	100	-----	-----	100
STRUCTURE	- - - - -	100	-----	-----	-----	-----	-----	-----

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ING CRITERIA BY AREAS OF TECHNOLOGY AND HIGHEST DEGREE CURRICULA GROUPS--CONTINUED

## HIGHEST DEGREE CURRICULA GROUPS

TOTAL	AERO- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL	GENERAL	MECHAN- ICAL	METAL- LURGICAL	MINERAL	OTHER	NO REPORT OF CUR- RICULUM
800	400	1,000	200	1,500	900	3,200	200	100	1,100	200
600	---	---	---	200	100	100	---	---	100	---
600	---	---	---	200	100	100	---	---	100	---
100	---	---	---	---	---	---	---	---	---	---
500	---	100	---	---	---	200	---	---	100	---
800	100	400	---	100	200	1,700	---	---	100	---
100	---	---	---	---	---	---	---	---	200	100
---	---	---	---	---	---	---	---	---	---	---
300	---	---	---	200	---	---	---	---	---	---
100	---	---	---	---	---	100	---	---	---	---
300	---	---	---	100	---	100	---	---	---	---
300	---	100	---	100	---	---	---	---	100	---
500	---	---	---	100	---	---	---	---	100	---
200	100	---	---	---	100	---	---	---	200	---
---	---	---	---	---	---	---	---	---	---	---
500	---	---	---	300	100	---	---	---	---	---
300	100	200	---	---	100	700	100	---	100	---
100	---	---	---	---	---	---	---	---	100	---
100	---	---	---	---	---	---	---	---	---	---
200	---	---	---	200	---	---	---	---	---	---
---	---	---	---	---	---	---	---	---	---	---
600	100	400	100	400	100	900	100	---	500	---
500	---	300	100	100	100	400	100	---	300	---
200	---	---	---	100	---	---	---	---	---	---
800	---	100	---	100	---	400	---	---	100	---
100	---	---	---	---	---	---	---	---	---	---
---	---	---	---	---	---	---	---	---	---	---
600	1,000	5,700	9,500	3,000	1,700	4,400	500	3,200	3,400	1,100
300	---	---	---	---	100	100	---	---	---	---
200	---	---	---	---	---	100	---	---	---	---
400	---	100	100	---	---	200	---	900	100	---
200	---	100	---	---	---	---	---	---	100	---
800	800	2,300	8,600	2,200	1,100	2,700	200	1,800	2,200	900
200	---	---	---	---	---	100	---	---	---	---
300	---	---	---	---	---	100	100	---	---	---
100	---	---	100	100	100	400	---	100	200	100
100	200	100	500	500	100	300	100	---	300	---
---	---	---	---	---	---	---	---	---	---	---
500	---	2,500	100	100	100	300	100	---	300	---
400	---	700	100	---	---	100	---	---	100	---
100	---	---	---	---	---	---	---	300	---	---

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL  
NUMBER OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND HIGHEST DEGREE

AREAS OF TECHNOLOGY	TOTAL	AERD- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL	GE
AREAS OF TECHNOLOGY, CONTINUED						
AUTOMATION AND CONTROL - - - -	12,800	500	900	500	5,300	
ADAPTIVE SYSTEMS - - - - -	100	-----	-----	-----	-----	
AUTOMATION, CYBERNETICS - - - -	500	-----	-----	-----	200	
CONTROL (GENERAL) - - - - -	4,300	200	200	400	1,700	
GUIDANCE, STABILITY - - - - -	1,000	100	-----	-----	500	
INSTRUMENTATION - - - - -	5,700	100	600	100	2,200	
MEASUREMENT, METROLOGY - - - -	500	-----	-----	-----	200	
SERVO-MECHANISMS - - - - -	200	-----	-----	-----	100	
TELEMETRY - - - - -	300	-----	-----	-----	200	
WORK MGMT, EVALUATION - - - -	58,100	2,400	5,600	5,400	11,000	
ARRANGEMENT - - - - -	100	-----	-----	-----	-----	
CONFIGURATION CONTROL - - - - -	300	-----	-----	-----	100	
COST ENGINEERING - - - - -	2,500	-----	300	800	300	
EQUIPMENT FACILITIES - - - - -	500	-----	100	100	100	
FIRE PREVENTION - - - - -	800	-----	100	100	100	
INDUSTRIAL ENGINEERING - - - - -	8,300	100	200	200	200	
MAINTAINABILITY, MAINTENANCE - - -	2,300	100	100	400	600	
MANUFACTURING TECHNOLOGY - - - -	4,600	100	1,200	100	500	
MOTION AND TIME STUDY - - - - -	-----	-----	-----	-----	-----	
NONDESTRUCTIVE TESTS - - - - -	200	-----	-----	-----	100	
OPERATING PROCEDURES - - - - -	1,100	-----	200	100	200	
OPERATIONS RESEARCH - - - - -	2,700	300	200	100	400	
PLANT AND FACILITIES ENGR. - - - -	7,000	100	1,000	1,400	800	
PRODUCT ENGINEERING - - - - -	5,000	100	400	300	1,100	
PRODUCTION METHODS - - - - -	1,700	-----	300	100	100	
PRODUCTION PLANNING, CONTROL - - -	3,400	100	800	400	200	
QUALITY ASSURANCE - - - - -	1,200	100	100	100	300	
QUALITY CONTROL - - - - -	1,100	-----	200	100	100	
RADIOGRAPHY, X-RAYS - - - - -	-----	-----	-----	-----	-----	
RELIABILITY - - - - -	900	100	-----	-----	400	
SAFETY ENGINEERING - - - - -	600	100	100	100	100	
SPECIFICATIONS, STANDARDS - - - -	900	-----	100	300	300	
SYSTEMS ENGINEERING - - - - -	8,400	700	200	300	4,100	
TESTING-ENVIRONMENTAL - - - - -	1,900	300	-----	-----	600	
TESTING-LABORATORY - - - - -	1,500	100	100	200	300	
TOOLING, TOOLS - - - - -	200	-----	-----	-----	-----	
VALUE ENGINEERING - - - - -	400	-----	-----	100	100	
WORK METHODS, SIMPLIFICATION - - -	300	-----	-----	-----	-----	

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 MEETING CRITERIA BY AREAS OF TECHNOLOGY AND HIGHEST DEGREE CURRICULA GROUPS--CONTINUED

HIGHEST DEGREE CURRICULA GROUPS										
TOTAL	AERO- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL	GENERAL	MECHAN- ICAL	METAL- LURGICAL	MINERAL	OTHER	NO REPORT OF CUR- RICULUM
12,800	500	900	500	5,300	1,200	2,400	100	100	1,500	200
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
500	-----	-----	-----	200	-----	100	-----	-----	100	-----
4,300	200	200	400	1,700	400	800	-----	100	400	-----
1,000	100	-----	-----	500	100	100	-----	-----	200	-----
5,700	100	600	100	2,200	600	1,100	100	100	700	100
500	-----	-----	-----	200	-----	100	-----	-----	100	-----
200	-----	-----	-----	100	-----	100	-----	-----	-----	-----
300	-----	-----	-----	200	-----	-----	-----	-----	-----	-----
58,100	2,400	5,600	5,400	11,000	9,900	11,700	800	2,200	8,100	1,000
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
300	-----	-----	-----	100	-----	100	-----	-----	-----	-----
2,500	-----	300	800	300	300	200	-----	100	300	100
500	-----	100	100	100	100	200	-----	-----	-----	-----
800	-----	100	100	100	100	200	-----	-----	200	-----
8,300	100	200	200	200	4,900	900	-----	100	1,600	200
2,300	100	100	400	600	200	700	-----	-----	200	100
4,600	100	1,200	100	500	600	1,100	200	100	600	100
200	-----	-----	-----	100	-----	-----	-----	-----	-----	-----
1,100	-----	200	100	200	100	100	-----	200	100	-----
2,700	300	200	100	400	700	200	-----	100	700	-----
7,000	100	1,000	1,400	800	500	2,300	-----	100	600	100
5,000	100	400	300	1,100	400	1,800	100	-----	800	-----
1,700	-----	300	100	100	200	300	-----	600	200	-----
3,400	100	800	400	200	300	400	100	700	400	-----
1,200	100	100	100	300	100	200	100	-----	200	-----
1,100	-----	200	100	100	100	100	100	-----	200	-----
900	100	-----	-----	400	100	200	-----	-----	200	-----
600	100	100	100	100	100	100	-----	100	100	-----
900	-----	100	300	300	-----	100	-----	-----	100	-----
8,400	700	200	300	4,100	700	1,200	-----	-----	1,100	100
1,900	300	-----	-----	600	100	500	-----	-----	200	-----
1,500	100	100	200	300	100	400	100	-----	200	-----
200	-----	-----	-----	-----	-----	100	-----	-----	-----	-----
400	-----	-----	100	100	100	100	-----	100	-----	-----
300	-----	-----	-----	-----	100	-----	-----	-----	-----	-----

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NUMBER OF ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND HIGHEST DEGREE C

HIGHEST DEGREE CURRICULA

AREAS OF TECHNOLOGY	TOTAL	AERO- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL	GENERAL	MECH- ICA
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AREAS OF TECHNOLOGY, CONTINUED

INFORMATION, MATHEMATICS - - -	11,700	500	900	1,400	3,800	1,400	1,500
COMPUTER APPLICATIONS - - - - -	5,900	200	600	400	2,500	600	500
DATA PROCESSING - - - - -	1,100	-----	100	100	500	200	100
DISPLAY - - - - -	400	-----	-----	-----	300	-----	-----
DRAFTING, DRAWING, GRAPHICS - - -	900	-----	-----	200	100	100	200
INFORMATION RETRIEVAL - - - - -	200	-----	-----	-----	100	-----	100
INFORMATION THEORY - - - - -	100	-----	-----	-----	100	-----	-----
LOGIC - - - - -	300	-----	-----	-----	300	-----	-----
MATHEMATICS - - - - -	400	-----	100	-----	100	-----	-----
NEURAL NETS - - - - -	-----	-----	-----	-----	-----	-----	-----
REPROGRAPHY - - - - -	-----	-----	-----	-----	-----	-----	-----
STATISTICS - - - - -	200	-----	-----	-----	-----	-----	-----
STRESS ANALYSIS - - - - -	1,900	300	-----	700	-----	300	500
OTHER - - - - -	10,100	500	1,300	1,600	1,200	800	1,700
NO REPORT - - - - -	5,300	200	400	1,100	1,000	500	900

NOTE - GROUPS MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING. GROUPS OF CURRICULA ARE DEFINED AS AERONAUTICAL, CIVIL (ARCHITECTURAL, CIVIL, CONSTRUCTION, ENVIRONMENTAL, SANITARY, TRANSPORTATION), ELECTRICAL, ELECTRONIC, GENERAL (ENGINEERING MECHANICS, ENGINEERING SCIENCE, ENGINEERING TECHNOLOGY, INDUSTRIAL, MATERIALS), MECHANICAL (MARINE, METALLURGICAL, WELDING), MINERAL (GEOLOGICAL, GEOPHYSICAL, MINERAL, MINING, PETROLEUM), BIOENGINEERING, CERAMIC, NAVAL ARCHITECTURE, NUCLEAR, TEXTILE, OTHER ENGINEERING, BUSINESS, PHYSICS, OTHER NONENGINEERING).

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## ENGINEERS MEETING CRITERIA BY AREAS OF TECHNOLOGY AND HIGHEST DEGREE CURRICULA GROUPS--CONTINUED

HIGHEST DEGREE CURRICULA GROUPS											
TOTAL	AERO- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL	GENERAL	MECHAN- ICAL	METAL- LURGICAL	MINERAL	OTHER	NO REPORT OF CUR- RICULUM	
11,700	500	900	1,400	3,800	1,400	1,500	100	300	1,700	100	
5,900	200	600	400	2,500	600	500	-----	200	800	-----	
1,100	-----	100	100	500	200	100	-----	-----	200	-----	
400	-----	-----	-----	300	-----	-----	-----	-----	100	-----	
900	-----	-----	200	100	100	200	-----	-----	200	-----	
200	-----	-----	-----	100	-----	100	-----	-----	-----	-----	
100	-----	-----	-----	100	-----	-----	-----	-----	-----	-----	
300	-----	-----	-----	300	-----	-----	-----	-----	-----	-----	
400	-----	100	-----	100	-----	-----	-----	-----	200	-----	
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
200	-----	-----	-----	-----	-----	-----	-----	-----	100	-----	
1,900	300	-----	700	-----	300	500	-----	-----	100	-----	
10,100	500	1,300	1,600	1,200	800	1,700	200	800	1,900	100	
5,300	200	400	1,100	1,000	500	900	200	400	600	100	

D TOTAL BECAUSE OF ROUNDING. GROUPS OF CURRICULA ARE DEFINED AS AEROSPACE (AERONAUTICAL AND  
 L (ARCHITECTURAL, CIVIL, CONSTRUCTION, ENVIRONMENTAL, SANITARY, TRANSPORTATION), ELECTRICAL  
 CTICAL, ELECTRONIC), GENERAL (ENGINEERING MECHANICS, ENGINEERING GENERAL, ENGINEERING PHYSICS,  
 ENGINEERING TECHNOLOGY, INDUSTRIAL, MATERIALS), MECHANICAL (MARINE, MECHANICAL), METALLURGICAL  
 ING), MINERAL (GEOLOGICAL, GEOPHYSICAL, MINERAL, MINING, PETROLEUM), OTHER (AGRICULTURAL,  
 MIC, NAVAL ARCHITECTURE, NUCLEAR, TEXTILE, OTHER ENGINEERING, BUSINESS ADMINISTRATION, CHEMISTRY,  
 GINEERING).

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND

PRODUCTS OR SERVICES	TOTAL	PRIVATE INDUSTRY OR BUSINESS	SELF- EM- PLOYED	COLLEGE OR UNIV.	JR.COL. OR TECH. INST.	SEC., ELEM., OTHER SCHOOL	TYPES OF EMPL	
							NON- PROFIT ORG., OTHER THAN A SCHOOL	FED GO CIVI EMPL
ALL PRODUCTS OR SERVICES	308,000	211,100	11,400	20,200	900	300	5,400	24,
AGRICULTURE AND FOOD - -	4,200	2,200	200	600	-----	-----	-----	-----
THIS FIELD GENERALLY - - -	800	300	-----	200	-----	-----	-----	-----
AGRICULTURAL SERVICES - - -	600	100	-----	100	-----	-----	-----	-----
ANIMALS - - - - -	100	100	-----	-----	-----	-----	-----	-----
DISTILLED PRODUCTS - - - -	100	100	-----	-----	-----	-----	-----	-----
FISH PRODUCTS - - - - -	-----	-----	-----	-----	-----	-----	-----	-----
FORESTRY - - - - -	100	-----	-----	-----	-----	-----	-----	-----
FOOD AND BEVERAGE PRODUCTS	1,400	1,300	-----	-----	-----	-----	-----	-----
NATURAL FIBERS - - - - -	100	-----	-----	-----	-----	-----	-----	-----
PLANTS - - - - -	100	-----	-----	-----	-----	-----	-----	-----
TOBACCO - - - - -	100	100	-----	-----	-----	-----	-----	-----
OTHER - - - - -	700	300	-----	100	-----	-----	-----	-----
AIRCRAFT AND SPACE - - -	33,800	24,000	300	1,300	-----	-----	1,100	4,
THIS FIELD GENERALLY - - -	6,100	4,000	100	200	-----	-----	200	1,
AERONAUTICS - - - - -	2,400	1,100	-----	300	-----	-----	100	-----
AIRCRAFT - - - - -	4,900	4,100	-----	-----	-----	-----	-----	-----
AIRCRAFT V/STOL - - - - -	800	500	-----	-----	-----	-----	-----	-----
AIRCRAFT ENGINES - - - - -	2,800	2,400	-----	-----	-----	-----	-----	-----
AIRCRAFT PARTS, ACCESSORIES	1,900	1,800	-----	-----	-----	-----	-----	-----
AIRCRAFT SERVICES - - - -	200	100	-----	-----	-----	-----	-----	-----
AIRLINES - - - - -	400	400	-----	-----	-----	-----	-----	-----
ASTRONAUTICS - - - - -	2,000	1,200	-----	200	-----	-----	100	-----
LAUNCH VEHICLES - - - - -	2,100	1,500	-----	-----	-----	-----	100	-----
RE-ENTRY DEVICES - - - - -	1,500	1,100	-----	-----	-----	-----	200	-----
SPACECRAFT - - - - -	3,800	2,700	-----	200	-----	-----	200	-----
SPACECRAFT ENGINES - - - -	1,300	1,000	-----	100	-----	-----	-----	-----
SPACECRAFT PARTS, ACCESS.	700	600	-----	-----	-----	-----	-----	-----
SPACECRAFT SERVICES - - -	300	200	-----	-----	-----	-----	-----	-----
OTHER - - - - -	2,500	1,500	-----	200	-----	-----	100	-----
CERAMICS - - - - -	2,200	1,800	-----	100	-----	-----	100	-----
THIS FIELD GENERALLY - - -	200	100	-----	100	-----	-----	-----	-----
ABRASIVES - - - - -	100	100	-----	-----	-----	-----	-----	-----
CEMENT, CONCRETE, GYPSUM PROD	500	400	-----	-----	-----	-----	100	-----
CLAY PRODUCTS - - - - -	100	100	-----	-----	-----	-----	-----	-----
GLASS PRODUCTS - - - - -	600	600	-----	-----	-----	-----	-----	-----
INSULATION MATERIALS - - -	100	100	-----	-----	-----	-----	-----	-----
REFRACTORIES - - - - -	300	200	-----	-----	-----	-----	-----	-----
RELATED SERVICES - - - - -	-----	-----	-----	-----	-----	-----	-----	-----
OTHER - - - - -	200	200	-----	-----	-----	-----	-----	-----

# NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND TYPES OF EMPLOYER

### TYPES OF EMPLOYER

TOTAL	PRIVATE INDUSTRY OR BUSINESS	SELF- EM- PLOYED	COLLEGE OR UNIV.	JR.COL. OR TECH. INST.	SEC., ELEM., OTHER SCHOOL	NON- PROFIT ORG., OTHER THAN A SCHOOL	FEDERAL GOVT. CIVILIAN EMPLOYEE	USPHS, MILI- TARY SERVICE	STATE GOVT.	LOCAL GOVT.	OTHER	NO REPORT
38,000	211,100	11,400	20,200	900	300	5,400	24,600	4,900	5,900	4,800	4,600	14,000
4,200	2,200	200	600	-----	-----	-----	900	-----	-----	-----	-----	200
800	300	-----	200	-----	-----	-----	200	-----	-----	-----	-----	100
600	100	-----	100	-----	-----	-----	300	-----	-----	-----	-----	-----
100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
1,400	1,300	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
700	300	-----	100	-----	-----	-----	200	-----	-----	-----	-----	-----
33,800	24,000	300	1,300	-----	-----	1,100	4,700	1,300	-----	-----	300	800
6,100	4,000	100	200	-----	-----	200	1,000	300	-----	-----	-----	200
2,400	1,100	-----	300	-----	-----	100	600	200	-----	-----	-----	100
4,900	4,100	-----	-----	-----	-----	-----	400	300	-----	-----	-----	100
800	500	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
2,800	2,400	-----	-----	-----	-----	-----	200	-----	-----	-----	-----	-----
1,900	1,800	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
200	100	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
400	400	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2,000	1,200	-----	200	-----	-----	100	400	100	-----	-----	-----	100
2,100	1,500	-----	-----	-----	-----	100	300	100	-----	-----	-----	100
1,500	1,100	-----	-----	-----	-----	200	100	-----	-----	-----	-----	-----
3,800	2,700	-----	200	-----	-----	200	600	-----	-----	-----	-----	-----
1,300	1,000	-----	100	-----	-----	-----	100	-----	-----	-----	-----	-----
700	600	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
300	200	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
2,500	1,500	-----	200	-----	-----	100	500	200	-----	-----	-----	-----
2,200	1,800	-----	100	-----	-----	100	-----	-----	-----	-----	-----	100
200	100	-----	100	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
500	400	-----	-----	-----	-----	100	-----	-----	-----	-----	-----	-----
100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
600	600	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
300	300	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----



NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1950  
NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND TYPES OF

TYPES OF EMPLOYER

PRODUCTS OR SERVICES	TOTAL	PRIVATE INDUSTRY OR BUSINESS	SELF- EM- PLOYED	COLLEGE OR UNIV.	JR.COL. OR TECH. INST.	SEC., ELEM., OTHER SCHOOL	NON- PROFIT ORG., OTHER THAN A SCHOOL	FEDERAL GOVT. CIVILIAN EMPLOYEE
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PRODUCTS OR SERVICES, CONTINUED

CHEMICALS, ALLIED PROD.	20,300	18,000	300	400	-----	-----	200	400
THIS FIELD GENERALLY - - -	4,300	3,500	100	200	-----	-----	-----	-----
AGRICULTURAL CHEMICALS - -	500	500	-----	-----	-----	-----	-----	-----
CARBON PRODUCTS - - - - -	500	400	-----	-----	-----	-----	-----	-----
CHEMICAL SERVICES - - - -	100	100	-----	-----	-----	-----	-----	-----
COSMETICS - - - - -	100	100	-----	-----	-----	-----	-----	-----
DRUGS AND PHARMACEUTICALS -	800	700	-----	-----	-----	-----	-----	-----
DYES AND ORGANIC PIGMENTS -	100	100	-----	-----	-----	-----	-----	-----
ELASTOMERS - - - - -	200	200	-----	-----	-----	-----	-----	-----
EXPLOSIVES - - - - -	300	200	-----	-----	-----	-----	-----	-----
FERMENTATION PRODUCTS - -	100	-----	-----	-----	-----	-----	-----	-----
FERTILIZER - - - - -	300	300	-----	-----	-----	-----	-----	-----
GASES - - - - -	400	300	-----	-----	-----	-----	-----	-----
INDUSTRIAL CHEMICALS - - -	1,900	1,800	-----	-----	-----	-----	-----	-----
INORGANICS - - - - -	500	400	-----	-----	-----	-----	-----	-----
NUCLEAR, RADIOACT. MATERIALS	1,000	600	-----	-----	-----	-----	100	100
ORGANICS - - - - -	1,000	900	-----	-----	-----	-----	-----	-----
PAINTS AND COATINGS - - -	300	300	-----	-----	-----	-----	-----	-----
PETROCHEMICALS - - - - -	2,200	2,100	-----	-----	-----	-----	-----	-----
PHOTOGRAPHIC CHEMICALS - -	200	200	-----	-----	-----	-----	-----	-----
PLASTICS, SYNTHETIC POLYMERS	2,700	2,600	-----	100	-----	-----	-----	-----
PROPELLANTS - - - - -	300	200	-----	-----	-----	-----	-----	100
SOAP AND DETERGENTS - - -	400	400	-----	-----	-----	-----	-----	-----
SYNTHETIC FIBERS - - - - -	1,000	1,000	-----	-----	-----	-----	-----	-----
OTHER - - - - -	1,100	900	-----	100	-----	-----	-----	-----
COMMUNICATIONS - - - - -	8,100	6,500	100	100	-----	-----	100	500
THIS FIELD GENERALLY - - -	2,600	1,900	100	100	-----	-----	100	300
BROADCASTING - - - - -	500	400	-----	-----	-----	-----	-----	-----
CABLE TELEVISION - - - - -	100	100	-----	-----	-----	-----	-----	-----
COMMUNICATION SERVICES - -	1,100	900	-----	-----	-----	-----	-----	100
MOTION PICTURES - - - - -	-----	-----	-----	-----	-----	-----	-----	-----
TELEGRAPH - - - - -	100	100	-----	-----	-----	-----	-----	-----
TELEPHONE - - - - -	2,800	2,500	-----	-----	-----	-----	-----	-----
OTHER - - - - -	800	600	-----	-----	-----	-----	-----	100

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND TYPES OF EMPLOYER--CONTINUED

## TYPES OF EMPLOYER

TOTAL	PRIVATE INDUSTRY OR BUSINESS	SELF- EM- PLOYED	COLLEGE OR UNIV.	JR.COL. OR TECH. INST.	SEC., ELEM., OTHER SCHOOL	NON- PROFIT ORG., OTHER THAN A SCHOOL	FEDERAL GOVT. CIVILIAN EMPLOYEE	USPHS, MILI- TARY SERVICE	STATE GOVT.	LOCAL GOVT.	OTHER	NO REPORT
20,300	18,000	300	400	-----	-----	200	400	100	-----	-----	200	800
4,300	3,500	100	200	-----	-----	-----	-----	-----	-----	-----	-----	400
500	500	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
500	400	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
800	700	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
300	200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
300	300	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
400	300	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1,900	1,800	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100
500	400	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1,000	600	-----	-----	-----	-----	100	100	-----	-----	-----	100	-----
1,000	900	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
300	300	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2,200	2,100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2,700	2,600	-----	100	-----	-----	-----	-----	-----	-----	-----	-----	100
300	200	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
400	400	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1,000	1,000	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1,100	900	-----	100	-----	-----	-----	-----	-----	-----	-----	-----	-----
8,100	6,500	100	100	-----	-----	100	500	100	-----	-----	200	400
2,600	1,900	100	100	-----	-----	100	300	100	-----	-----	-----	100
500	400	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1,100	900	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	100
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2,800	2,500	-----	-----	-----	-----	-----	-----	-----	-----	-----	100	200
800	600	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES

PRODUCTS OR SERVICES	TOTAL	PRIVATE INDUSTRY OR BUSINESS	SELF- EMP- LOYED	COLLEGE OR UNIV.	JR.COL. OR TECH. INST.	S EL OT SC
PRODUCTS OR SERVICES, CONTINUED						
COMPUTERS - - - - -	11,100	9,600	200	300	-----	--
THIS FIELD GENERALLY - - -	4,000	3,400	100	100	-----	--
ANALOG EQUIPMENT - - - - -	200	100	-----	-----	-----	--
COMPONENTS AND PARTS - - - -	400	400	-----	-----	-----	--
COMPUTER SERVICES - - - - -	1,000	900	-----	-----	-----	--
DIGITAL EQUIPMENT - - - - -	1,900	1,700	-----	-----	-----	--
HYBRID EQUIPMENT - - - - -	200	200	-----	-----	-----	--
MEMORY UNITS - - - - -	300	300	-----	-----	-----	--
OPTICAL EQUIPMENT - - - - -	100	100	-----	-----	-----	--
PERIPHERAL EQUIPMENT - - - -	1,200	1,000	-----	-----	-----	--
SOFTWARE - - - - -	1,400	1,100	-----	100	-----	--
OTHER - - - - -	500	400	-----	-----	-----	--
CONSTRUCTION, CIVIL ENGR. -	49,200	22,100	4,200	1,500	100	--
THIS FIELD GENERALLY - - -	10,600	5,100	1,300	300	-----	--
AIRPORTS AND FACILITIES - - -	700	200	-----	-----	-----	--
ARCHITECTURE - - - - -	600	300	200	-----	-----	--
BRIDGES - - - - -	2,200	800	100	-----	-----	--
BUILDINGS AND STRUCTURES - -	8,100	4,700	1,300	400	-----	--
CHEMICAL PLANTS, FACILITIES -	1,700	1,500	-----	-----	-----	--
CITY, REGION., URBAN PLANNING -	700	200	-----	-----	-----	--
CONSTRUCTION SERVICES - - -	900	700	100	-----	-----	--
DAMS, WATER CONTROL STRUCT. -	2,600	300	-----	100	-----	--
EXCAVATION AND FOUNDATION - -	700	400	100	100	-----	--
HEAVY CONSTRUCTION - - - - -	1,100	800	100	-----	-----	--
HIGHWAYS - - - - -	5,200	1,100	100	200	-----	--
HYDRO-ELECTRIC FACILITIES - -	500	200	-----	-----	-----	--
INDUST. PLANTS, FACILITIES - -	2,100	1,900	100	-----	-----	--
LANDSCAPING - - - - -	-----	-----	-----	-----	-----	--
MILITARY CONSTRUCTION - - -	1,200	100	-----	-----	-----	--
PREFABRICATED CONSTRUCTION - -	300	200	-----	-----	-----	--
PUBLIC WORKS - - - - -	2,700	600	200	-----	-----	--
RECREATIONAL FACILITIES - - -	100	-----	-----	-----	-----	--
RIVERS AND HARBORS - - - - -	500	100	-----	-----	-----	--
SANITARY FACILITIES - - - - -	1,900	900	200	100	-----	--
SPACECRAFT, MISSILE FACILIT. -	200	100	-----	-----	-----	--
SURVEYING AND MAPPING - - -	700	100	200	-----	-----	--
THIN-SHELL CONSTRUCTION - - -	100	100	-----	-----	-----	--
TUNNELING - - - - -	200	100	-----	-----	-----	--
WATER SUPPLY AND TREATMENT -	1,400	600	100	100	-----	--
OTHER - - - - -	2,200	1,000	100	100	-----	--

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND TYPES OF EMPLOYER--CONTINUED

TYPES OF EMPLOYER

	TOTAL	PRIVATE INDUSTRY OR BUSINESS	SELF- EMPLOYED	COLLEGE OR UNIV.	JR.COL. OR TECH. INST.	SEC., ELEM., OTHER SCHOOL	NON- PROFIT ORG., OTHER THAN A SCHOOL	FEDERAL GOVT. CIVILIAN EMPLOYEE	USPHS, MILI- TARY SERVICE	STATE GOVT.	LOCAL GOVT.	OTHER	NO REPORT
	11,100	9,600	200	300	-----	-----	300	400	100	-----	-----	100	100
	4,000	3,400	100	100	-----	-----	100	200	-----	-----	-----	-----	100
	200	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	400	400	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	1,000	900	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	1,900	1,700	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
	200	200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	300	300	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	1,100	1,000	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	1,400	1,100	-----	100	-----	-----	100	-----	-----	-----	-----	-----	-----
	500	400	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	49,200	22,100	4,200	1,500	100	-----	400	7,300	1,400	4,800	3,100	1,000	3,400
	10,600	5,100	1,300	300	-----	-----	100	1,100	300	300	400	200	1,300
	700	200	-----	-----	-----	-----	-----	200	100	-----	-----	100	-----
	600	300	200	-----	-----	-----	-----	-----	-----	-----	-----	-----	100
	2,200	800	100	-----	-----	-----	-----	100	-----	800	100	100	100
	8,100	4,700	1,300	400	-----	-----	100	600	-----	100	300	100	400
	1,700	1,500	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100
	700	200	-----	-----	-----	-----	-----	100	-----	100	200	-----	100
	900	700	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	2,600	300	-----	100	-----	-----	-----	1,600	-----	200	100	-----	100
	700	400	100	100	-----	-----	-----	100	-----	-----	-----	-----	-----
	1,100	800	100	-----	-----	-----	-----	100	-----	-----	-----	-----	100
	5,200	1,100	100	200	-----	-----	100	600	-----	2,500	400	-----	300
	500	200	-----	-----	-----	-----	-----	200	-----	-----	-----	-----	100
	2,100	1,900	100	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
	1,200	100	-----	-----	-----	-----	-----	500	500	-----	-----	-----	100
	300	200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	2,700	600	200	-----	-----	-----	-----	400	100	100	1,100	-----	100
	100	-----	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
	500	100	-----	-----	-----	-----	-----	300	-----	-----	-----	-----	-----
	1,900	900	200	100	-----	-----	-----	100	100	200	200	100	100
	200	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	700	100	200	-----	-----	-----	-----	100	-----	-----	-----	-----	100
	100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	200	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	0	600	100	100	-----	-----	-----	200	-----	100	100	100	100
	0	1,000	100	100	-----	-----	-----	600	100	100	100	100	100

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND

TYPES OF

PRODUCTS OR SERVICES	TOTAL	PRIVATE INDUSTRY OR BUSINESS	SELF- EM- PLOYED	COLLEGE OR UNIV.	JR. COL. OR TECH. INST.	SEC., ELEM., OTHER SCHOOL	NON- PROFIT ORG., OTHER THAN A SCHOOL
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PRODUCTS OR SERVICES, CONTINUED

EDUC., INFORMATION SERV.	15,400	700	100	12,100	800	200	300
THIS FIELD GENERALLY - - -	2,500	100	-----	1,800	100	100	100
ENGINEERING INSTRUCTION - -	10,400	200	-----	9,100	300	-----	-----
INFORMATION SERVICES - - -	400	100	-----	100	-----	-----	100
LIBRARIES - - - - -	-----	-----	-----	-----	-----	-----	-----
TECHNICAL INSTRUCTION - - -	1,200	100	-----	600	300	100	-----
OTHER - - - - -	900	100	-----	500	-----	100	100
ELECTRICAL EQUIP., SERV.	20,400	16,500	800	100	-----	-----	200
THIS FIELD GENERALLY - - -	4,100	2,700	300	100	-----	-----	100
BUSINESS, OFFICE EQUIPMENT	600	600	-----	-----	-----	-----	-----
COMPONENTS AND ACCESSORIES	800	700	-----	-----	-----	-----	-----
CONTROLS - - - - -	1,500	1,300	-----	-----	-----	-----	-----
ELECTRICAL SERVICES - - -	400	200	100	-----	-----	-----	-----
HOUSEHOLD APPLIANCES - - -	600	600	-----	-----	-----	-----	-----
INDUSTRIAL ELEC. EQUIPMENT	2,800	2,600	100	-----	-----	-----	-----
INSTRUMENTS, TEST EQUIPMENT	1,300	1,000	100	-----	-----	-----	-----
INSULATED CONDUCTORS - - -	400	400	-----	-----	-----	-----	-----
LIGHTING AND WIRING - - -	500	300	100	-----	-----	-----	-----
MAGNETIC DEVICES - - - -	300	300	-----	-----	-----	-----	-----
POWER GENERATION - - - -	2,200	1,700	100	-----	-----	-----	-----
RURAL ELECTRIFICATION - - -	200	100	-----	-----	-----	-----	-----
STORAGE BATTERIES - - - -	100	100	-----	-----	-----	-----	-----
SWITCHGEAR - - - - -	600	600	-----	-----	-----	-----	-----
TELEPHONE EQUIPMENT - - -	600	500	-----	-----	-----	-----	-----
TRANSFORMERS - - - - -	900	800	-----	-----	-----	-----	-----
TRANSMISSION, DISTRIBUTION	1,700	1,300	-----	-----	-----	-----	-----
WELDING APPARATUS - - - -	200	200	-----	-----	-----	-----	-----
OTHER - - - - -	800	700	-----	-----	-----	-----	-----

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND TYPES OF EMPLOYER--CONTINUED

## TYPES OF EMPLOYER

	TOTAL	PRIVATE INDUSTRY OR BUSINESS	SELF- EM- PLOYED	COLLEGE OR UNIV.	JR.COL. OR TECH. INST.	SEC., ELEM., OTHER SCHOOL	NON- PROFIT ORG., OTHER THAN A SCHOOL	FEDERAL GOVT. CIVILIAN EMPLOYEE	USPHS, MILI- TARY SERVICE	STATE GOVT.	LOCAL GOVT.	OTHER	NO REPORT
CONTINUED													
V.	15,400	700	100	12,100	800	200	300	200	200	100	-----	-----	700
-	2,500	100	-----	1,800	100	100	100	-----	-----	-----	-----	-----	100
-	10,400	200	-----	9,100	300	-----	-----	100	100	100	-----	-----	500
-	400	100	-----	100	-----	-----	100	-----	-----	-----	-----	-----	-----
-	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	1,200	100	-----	600	300	100	-----	-----	-----	-----	-----	-----	100
-	900	100	-----	500	-----	100	100	-----	-----	-----	-----	-----	100
V.	20,400	16,500	800	100	-----	-----	200	1,000	-----	100	200	300	1,200
-	4,100	2,700	300	100	-----	-----	100	300	-----	-----	-----	100	600
T	600	600	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
S	800	700	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	1,500	1,300	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
-	400	200	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	600	600	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
T	2,800	2,600	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	100
NT	1,300	1,000	100	-----	-----	-----	-----	100	-----	-----	-----	-----	100
-	400	400	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	500	300	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	300	300	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	2,200	1,700	100	-----	-----	-----	-----	200	-----	-----	-----	100	100
-	200	100	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
-	100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	600	600	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	600	500	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	900	800	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
N	1,700	1,300	-----	-----	-----	-----	-----	200	-----	-----	-----	100	100
-	200	200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	800	700	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND

PRODUCTS OR SERVICES	TOTAL	PRIVATE INDUSTRY OR BUSINESS	SELF- EMPLOYED	COLLEGE OR UNIV.	JR.COL. OR TECH. INST.	SEC., ELEM., OTHER SCHOOL	TYPES OF
							NON- PROFI ORG. OTHER THAN SCHOOL
PRODUCTS OR SERVICES, CONTINUED							
ELECTRONIC EQUIP., SERV.	23,500	19,200	400	500	-----	-----	500
THIS FIELD GENERALLY - - -	5,500	4,000	200	200	-----	-----	200
ANTENNAS - - - - -	700	500	-----	-----	-----	-----	-----
AUDIO - - - - -	200	200	-----	-----	-----	-----	-----
COMPONENTS AND ACCESSORIES	900	800	-----	-----	-----	-----	-----
CONTROLS - - - - -	1,000	800	-----	-----	-----	-----	-----
ELECTROACOUSTIC TRANSDUCERS	-----	-----	-----	-----	-----	-----	-----
ELECTRO-OPTICAL DEVICES - -	900	800	-----	-----	-----	-----	-----
ELECTRON TUBES - - - - -	800	700	-----	-----	-----	-----	-----
ELECTRONIC EQUIP. GENERALLY	3,300	2,800	100	100	-----	-----	-----
ELECTRONIC SERVICES - - - -	200	100	-----	-----	-----	-----	-----
INSTRUMENTS, TEST EQUIPMENT	2,700	2,300	-----	-----	-----	-----	-----
INTEGRATED CIRCUITS - - - -	700	600	-----	-----	-----	-----	-----
LASERS - - - - -	200	100	-----	-----	-----	-----	-----
MICROWAVE AND RADAR - - - -	2,600	2,100	-----	100	-----	-----	100
RADIO AND TV RECEIVERS - -	400	400	-----	-----	-----	-----	-----
RADIO AND TV TRANSMITTERS -	100	100	-----	-----	-----	-----	-----
RECORDING - - - - -	200	200	-----	-----	-----	-----	-----
SEMICONDUCTOR DEVICES - - -	1,000	1,000	-----	-----	-----	-----	-----
SONAR - - - - -	600	400	-----	-----	-----	-----	-----
SONIC, ULTRASONIC DEVICES -	100	100	-----	-----	-----	-----	-----
THERMO-ELECTRIC DEVICES - -	100	100	-----	-----	-----	-----	-----
X-RAY - - - - -	100	100	-----	-----	-----	-----	-----
OTHER - - - - -	1,200	1,000	-----	-----	-----	-----	-----
LAB-SCI-PHOTO-OPT EQUIP.	2,900	2,200	100	100	-----	-----	100
THIS FIELD GENERALLY - - -	700	400	100	100	-----	-----	-----
LAB., SCIENTIFIC APPARATUS	500	300	-----	-----	-----	-----	-----
MEASURING, CONTROL INSTRUM.	800	700	-----	-----	-----	-----	-----
OPTICAL INSTRUMENTS, LENSES	200	200	-----	-----	-----	-----	-----
PHOTOGRAPHIC EQUIPMENT - -	300	200	-----	-----	-----	-----	-----
TEMPERATURE MEASUREMENT - -	200	100	-----	-----	-----	-----	-----
TIMING DEVICES - - - - -	-----	-----	-----	-----	-----	-----	-----
OTHER - - - - -	200	100	-----	-----	-----	-----	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND TYPES OF EMPLOYER--CONTINUED

TYPES OF EMPLOYER

TOTAL	PRIVATE INDUSTRY OR BUSINESS	SELF- EMPLOYED	COLLEGE OR UNIV.	JR.COL. OR TECH. INST.	SEC., ELEM., OTHER SCHOOL	NON- PROFIT ORG., OTHER THAN A SCHOOL	FEDERAL GOVT. CIVILIAN EMPLOYEE	USPHS, MILI- TARY SERVICE	STATE GOVT.	LOCAL GOVT.	OTHER	NO REPORT
23,500	19,200	400	500	-----	-----	500	2,100	100	-----	-----	200	500
5,500	4,000	200	200	-----	-----	200	600	100	-----	-----	-----	200
700	500	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
200	200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
900	800	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
1,000	800	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
900	800	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
800	700	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3,300	2,800	100	100	-----	-----	-----	200	-----	-----	-----	-----	100
200	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2,700	2,300	-----	-----	-----	-----	-----	200	-----	-----	-----	-----	100
700	600	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
200	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2,600	2,100	-----	100	-----	-----	100	300	-----	-----	-----	-----	-----
400	400	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1,000	1,000	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
600	400	-----	-----	-----	-----	-----	200	-----	-----	-----	-----	-----
100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1,200	1,000	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
2,900	2,200	100	100	-----	-----	100	300	-----	-----	-----	-----	100
700	400	100	100	-----	-----	-----	100	-----	-----	-----	-----	-----
500	300	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
800	700	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
300	200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----



NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND

PRODUCTS OR SERVICES	TOTAL	PRIVATE INDUSTRY OR BUSINESS	SELF- EM- PLOYED	COLLEGE OR UNIV.	JR.COL. OR TECH. INST.	SEC., ELEM., OTHER SCHOOL	TYPES OF
							NON- PROF. ORG. OTHER THAN SCHOOL
PRODUCTS OR SERVICES, CONTINUED							
MACHINERY, MECH. EQUIP.	30,100	23,800	2,100	500	-----	-----	30
THIS FIELD GENERALLY - - -	5,100	3,300	300	200	-----	-----	10
AIR COMPRESSORS, BLOWERS -	900	800	-----	-----	-----	-----	-----
AIR CONDITIONING, HEATING	8,300	6,100	1,300	100	-----	-----	-----
BEARINGS - - - - -	500	500	-----	-----	-----	-----	-----
CONSTRUCTION EQUIPMENT - -	600	500	-----	-----	-----	-----	-----
DIES, JIGS, PATTERNS - - -	100	100	-----	-----	-----	-----	-----
DISTILLING EQUIPMENT - - -	100	-----	-----	-----	-----	-----	-----
FARM MACHINERY - - - - -	1,400	1,200	-----	100	-----	-----	-----
FOOD MACHINERY - - - - -	200	200	-----	-----	-----	-----	-----
FURNACES, HEATING EQUIPMENT	900	700	100	-----	-----	-----	-----
GEARS - - - - -	100	100	-----	-----	-----	-----	-----
HYDRAULIC MACHINERY - - -	400	300	-----	-----	-----	-----	-----
INDUSTRIAL MACHINERY, EQUIP.	1,400	1,300	100	-----	-----	-----	-----
INTERNAL COMBUSTION ENGINES	500	400	-----	-----	-----	-----	-----
MACHINE TOOLS, ACCESSORIES	700	600	-----	-----	-----	-----	-----
MATERIALS HANDLING MACH. -	800	700	-----	-----	-----	-----	-----
MINING MACHINERY - - - - -	300	300	-----	-----	-----	-----	-----
NUCLEAR MACHINERY - - - - -	1,200	900	-----	-----	-----	-----	10
PAPER MACHINERY - - - - -	300	200	-----	-----	-----	-----	-----
PNEUMATIC EQUIPMENT - - -	300	300	-----	-----	-----	-----	-----
POWER TRANSMISSION EQUIP.	300	300	-----	-----	-----	-----	-----
PRINTING, DUPLICATING MACH.	200	200	-----	-----	-----	-----	-----
PUMPS, LIQUID HANDLING EQUIP	1,200	1,000	100	-----	-----	-----	-----
REFRIGERATING EQUIPMENT - -	700	600	-----	-----	-----	-----	-----
SPECIALIZED INDUSTRIAL MACH	1,000	900	-----	-----	-----	-----	-----
STEAM ENGINES - - - - -	100	-----	-----	-----	-----	-----	-----
TEXTILE MACHINERY - - - - -	200	200	-----	-----	-----	-----	-----
TURBINES - - - - -	800	800	-----	-----	-----	-----	-----
VENDING, SERVICE MACHINERY	-----	-----	-----	-----	-----	-----	-----
OTHER - - - - -	1,500	1,200	-----	-----	-----	-----	-----

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND TYPES OF EMPLOYER--CONTINUED

## TYPES OF EMPLOYER

	TOTAL	PRIVATE INDUSTRY OR BUSINESS	SELF- EM- PLOYED	COLLEGE OR UNIV.	JR.COL. OR TECH. INST.	SEC., ELEM., OTHER SCHOOL	NON- PROFIT ORG., OTHER THAN A SCHOOL	FEDERAL GOVT. CIVILIAN EMPLOYEE	USPHS, MILI- TARY SERVICE	STATE GOVT.	LOCAL GOVT.	OTHER	NO REPORT
CONTINUED													
P.	30,100	23,800	2,100	500	-----	-----	300	900	100	100	100	400	1,700
-	5,100	3,300	300	200	-----	-----	100	300	100	100	-----	100	700
-	900	800	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
G	8,300	6,100	1,300	100	-----	-----	-----	200	-----	-----	-----	200	400
-	500	500	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	600	500	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	1,400	1,200	-----	100	-----	-----	-----	100	-----	-----	-----	-----	-----
-	200	200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
ENT	900	700	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	400	300	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
IP.	1,400	1,300	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
NFS	500	400	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
ES	700	600	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	800	700	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	300	300	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	1,200	900	-----	-----	-----	-----	100	200	-----	-----	-----	100	-----
-	300	200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	300	300	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	300	300	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CH.	200	200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
JIP	1,200	1,000	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	700	600	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
ACH	1,000	900	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	200	200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	800	800	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
RY	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-	1,500	1,200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL  
NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES

PRODUCTS OR SERVICES	TOTAL	PRIVATE INDUSTRY OR BUSINESS	SELF- EMPLOYED	COLLEGE OR UNIV.	JR. COL. OR TECH. INST.	SEC., ELEM., OTHER SCHOOL
PRODUCTS OR SERVICES, CONTINUED						
MARINE TRANSPORTATION -	5,000	2,800	100	100	-----	-----
THIS FIELD GENERALLY - - -	700	400	-----	-----	-----	-----
BOATS AND SMALL CRAFT - - -	200	100	-----	-----	-----	-----
INLAND WATERWAY CRAFT, SERV. -	-----	-----	-----	-----	-----	-----
MARINE AUXILIARIES - - - - -	100	-----	-----	-----	-----	-----
MARINE ENGINES - - - - -	100	100	-----	-----	-----	-----
MERCHANT SHIPS - - - - -	300	200	-----	-----	-----	-----
NAVAL ARCHITECTURAL SER. -	700	300	100	-----	-----	-----
NAVAL VESSELS - - - - -	1,000	400	-----	-----	-----	-----
OCEAN TRANSPORTATION - - -	200	100	-----	-----	-----	-----
PORT FACILITIES, SERVICES -	100	-----	-----	-----	-----	-----
PROPELLERS AND SHAFTING -	-----	-----	-----	-----	-----	-----
SHIPBUILDING, REPAIR SERVICE -	800	500	-----	-----	-----	-----
UNDERWATER CRAFT - - - - -	400	300	-----	-----	-----	-----
OTHER - - - - -	300	200	-----	-----	-----	-----
MEDICAL, HEALTH SERVICES -	1,300	500	-----	200	-----	-----
THIS FIELD GENERALLY - - -	400	100	-----	100	-----	-----
ARTIFICIAL ORGANS - - - - -	100	-----	-----	-----	-----	-----
MEDICAL AND HEALTH CARE - -	200	100	-----	-----	-----	-----
MEDICAL, DENTAL INSTRUMENTS -	200	200	-----	-----	-----	-----
MEDICAL LABORATORY SERVICES -	-----	-----	-----	-----	-----	-----
PROSTHETIC DEVICES - - - - -	-----	-----	-----	-----	-----	-----
OTHER - - - - -	400	100	-----	100	-----	-----
METALS, BASIC - - - - -	13,500	10,700	200	800	-----	-----
THIS FIELD GENERALLY - - -	2,600	1,200	100	500	-----	-----
ALUMINUM - - - - -	1,300	1,200	-----	-----	-----	-----
COPPER - - - - -	500	400	-----	-----	-----	-----
ELECTROMETALLURGICAL PROD. -	200	100	-----	-----	-----	-----
FOUNDRIES - - - - -	600	600	-----	-----	-----	-----
IRON-STEEL MILLS, FOUNDRIES -	3,900	3,700	-----	-----	-----	-----
LEAD AND ZINC - - - - -	300	200	-----	-----	-----	-----
METALLURGICAL PRODUCTS - -	800	700	-----	-----	-----	-----
METALLURGICAL SERVICES - -	1,100	800	-----	100	-----	-----
NON-FERROUS SMELTING - - -	800	700	-----	-----	-----	-----
NON-FERROUS CASTINGS - - -	200	100	-----	-----	-----	-----
RADIOACTIVE METALS - - - - -	100	-----	-----	-----	-----	-----
RARE METALS - - - - -	-----	-----	-----	-----	-----	-----
REFRACTORY METALS - - - - -	300	200	-----	-----	-----	-----
OTHER - - - - -	900	600	-----	100	-----	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969  
OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND TYPES OF EMPLOYER--CONTINUED

TYPES OF EMPLOYER

TOTAL	PRIVATE INDUSTRY OR BUSINESS	SELF- EM- PLOYED	COLLEGE OR UNIV.	JR.COL. OR TECH. INST.	SEC., ELEM., OTHER SCHOOL	NON- PROFIT ORG., OTHER THAN A SCHOOL	FEDERAL GOVT. CIVILIAN EMPLOYEE	USPHS, MILI- TARY SERVICE	STATE GOVT.	LOCAL GOVT.	OTHER	NO REPORT
5,000	2,800	100	100	-----	-----	100	1,100	500	-----	-----	100	200
700	400	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
200	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
300	200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
700	300	100	-----	-----	-----	-----	100	-----	-----	-----	-----	100
1,000	400	-----	-----	-----	-----	-----	400	200	-----	-----	-----	-----
200	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
800	500	-----	-----	-----	-----	-----	100	100	-----	-----	-----	-----
400	300	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
300	200	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
1,300	500	-----	200	-----	-----	200	100	100	-----	-----	-----	-----
400	100	-----	100	-----	-----	100	100	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
400	100	-----	100	-----	-----	-----	-----	100	-----	-----	-----	-----
13,500	10,700	200	800	-----	-----	400	500	-----	-----	-----	100	800
2,600	1,200	100	500	-----	-----	200	200	-----	-----	-----	-----	400
1,300	1,200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
500	400	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
600	600	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3,900	3,700	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100
300	200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
800	700	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1,100	800	-----	100	-----	-----	-----	-----	-----	-----	-----	-----	100
800	700	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100
200	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
300	200	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
900	600	-----	100	-----	-----	-----	100	-----	-----	-----	-----	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969  
NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND TYPES OF EMPLOYER

PRODUCTS OR SERVICES	TOTAL	TYPES OF EMPLOYER							
		PRIVATE INDUSTRY OR BUSINESS	SELF- EMP- LOYED	COLLEGE OR UNIV.	JR.COL. OR TECH. INST.	SEC., ELEM., OTHER SCHOOL	NON- PROFIT ORG., OTHER THAN A SCHOOL	FEDERAL GOVT. CIVILIAN EMPLOYEE	USPHS, MILI- TARY SERVICE
PRODUCTS OR SERVICES, CONTINUED									
METAL FABRICATED PROD.	6,500	5,700	200	100	-----	-----	100	100	-----
THIS FIELD GENERALLY - - -	1,400	1,200	100	-----	-----	-----	-----	-----	-----
BOILERS - - - - -	500	400	-----	-----	-----	-----	-----	-----	-----
CANS AND CONTAINERS - - -	100	100	-----	-----	-----	-----	-----	-----	-----
ELECTROPLATED, COATED PROD.	200	100	-----	-----	-----	-----	-----	-----	-----
HARDWARE - - - - -	100	100	-----	-----	-----	-----	-----	-----	-----
MACHINED OR TURNED PRODUCTS	300	300	-----	-----	-----	-----	-----	-----	-----
METAL FABRICATION SERVICES	400	400	-----	-----	-----	-----	-----	-----	-----
PIPE, FITTINGS, VALVES - -	700	600	-----	-----	-----	-----	-----	-----	-----
PRESSURE VESSELS - - - -	600	500	-----	-----	-----	-----	-----	-----	-----
SHEET METAL PRODUCTS - - -	300	300	-----	-----	-----	-----	-----	-----	-----
STAMPINGS - - - - -	200	200	-----	-----	-----	-----	-----	-----	-----
STRUCTURAL STEEL PRODUCTS	400	400	-----	-----	-----	-----	-----	-----	-----
WELDMENTS - - - - -	200	100	-----	-----	-----	-----	-----	-----	-----
WIRE PRODUCTS - - - - -	300	300	-----	-----	-----	-----	-----	-----	-----
OTHER - - - - -	700	600	-----	-----	-----	-----	-----	-----	-----
MINING - - - - -	6,600	4,600	400	200	-----	-----	-----	600	-----
THIS FIELD GENERALLY - - -	2,000	1,000	200	100	-----	-----	-----	300	-----
COAL - - - - -	800	600	-----	-----	-----	-----	-----	100	-----
IRON ORES - - - - -	600	500	-----	-----	-----	-----	-----	-----	-----
MINING SERVICES - - - - -	300	100	-----	-----	-----	-----	-----	-----	-----
NON-FERROUS METAL ORES - -	1,400	1,200	-----	-----	-----	-----	-----	-----	-----
NON-METALLIC MINERALS - - -	500	400	-----	-----	-----	-----	-----	-----	-----
QUARRY PRODUCTS - - - - -	200	100	-----	-----	-----	-----	-----	-----	-----
SULFUR - - - - -	100	100	-----	-----	-----	-----	-----	-----	-----
URANIUM, RADIOACTIVE ORES	300	200	-----	-----	-----	-----	-----	-----	-----
OTHER - - - - -	300	200	-----	-----	-----	-----	-----	100	-----
MOTOR VEHICLE TRANS. - - -	2,600	2,000	-----	100	-----	-----	-----	100	-----
THIS FIELD GENERALLY - - -	500	300	-----	-----	-----	-----	-----	-----	-----
AUTOMOBILES - - - - -	800	700	-----	100	-----	-----	-----	-----	-----
BUSES, TRUCKS, TRAILERS - -	300	200	-----	-----	-----	-----	-----	-----	-----
ENGINES - - - - -	200	200	-----	-----	-----	-----	-----	-----	-----
MOTORCYCLES, ETC. - - - -	-----	-----	-----	-----	-----	-----	-----	-----	-----
MOTOR TRANSPORTATION SERV.	-----	-----	-----	-----	-----	-----	-----	-----	-----
PARTS AND ACCESSORIES - - -	600	500	-----	-----	-----	-----	-----	-----	-----
OTHER - - - - -	200	100	-----	-----	-----	-----	-----	-----	-----

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## MEETING CRITERIA BY PRODUCTS OR SERVICES AND TYPES OF EMPLOYER--CONTINUED

## TYPES OF EMPLOYER

PRIVATE INDUSTRY OR BUSINESS	SELF- EMP- LOYED	COLLEGE OR UNIV.	JR.COL. OR TECH. INST.	SEC., ELEM., OTHER SCHOOL	NON- PROFIT ORG., OTHER THAN A SCHOOL	FEDERAL GOVT. CIVILIAN EMPLOYEE	USPHS, MILI- TARY SERVICE	STATE GOVT.	LOCAL GOVT.	OTHER	NO REPORT
5,700	200	100	-----	-----	100	100	-----	-----	-----	-----	200
1,200	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	100
400	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
300	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
400	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
600	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
500	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
300	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
400	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
300	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
600	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
4,600	400	200	-----	-----	-----	600	-----	100	-----	-----	700
1,000	200	100	-----	-----	-----	300	-----	-----	-----	-----	300
600	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	100
500	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100
200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100
400	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
1,000	-----	100	-----	-----	-----	100	-----	100	-----	-----	100
300	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
700	-----	100	-----	-----	-----	-----	-----	-----	-----	-----	100
200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
500	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES

PRODUCTS OR SERVICES	TOTAL	PRIVATE INDUSTRY OR BUSINESS	SELF- EMPLOYED	COLLEGE OR UNIV.	JR. COL. OR TECH. INST.	S EL CT SC
PRODUCTS OR SERVICES, CONTINUED						
ORDNANCE - - - - -	5,200	2,800	-----	100	-----	---
THIS FIELD GENERALLY - - -	1,200	500	-----	-----	-----	---
AMMUNITION - - - - -	300	100	-----	-----	-----	---
FIRE CONTROL EQUIPMENT - -	500	300	-----	-----	-----	---
GUIDED MISSILES - - - - -	2,100	1,400	-----	-----	-----	---
GUNS - - - - -	100	-----	-----	-----	-----	---
ORDNANCE SERVICES - - - - -	100	-----	-----	-----	-----	---
SMALL ARMS - - - - -	100	-----	-----	-----	-----	---
TANKS - - - - -	100	100	-----	-----	-----	---
OTHER - - - - -	800	300	-----	100	-----	---
PETROLEUM - - - - -	16,100	14,100	700	100	-----	---
THIS FIELD GENERALLY - - -	6,000	5,000	400	-----	-----	---
ASPHALT MATERIALS - - - - -	100	100	-----	-----	-----	---
CRUDE PETROLEUM - - - - -	1,700	1,700	-----	-----	-----	---
GAS PIPELINES - - - - -	400	400	-----	-----	-----	---
LIQUIFIED GAS - - - - -	100	100	-----	-----	-----	---
LUBRICATING OIL AND GREASE -	200	200	-----	-----	-----	---
NATURAL GAS - - - - -	600	500	-----	-----	-----	---
OILFIELD SERVICES - - - - -	1,400	1,300	100	-----	-----	---
OIL PIPELINES - - - - -	300	300	-----	-----	-----	---
REFINERY PRODUCTS - - - - -	1,500	1,500	-----	-----	-----	---
RESERVOIRS (OIL AND GAS) -	2,400	2,100	100	-----	-----	---
OTHER - - - - -	1,200	1,000	100	-----	-----	---
RAILWAY, RAPID TRANSIT - -	1,700	1,300	-----	-----	-----	---
THIS FIELD GENERALLY - - -	500	300	-----	-----	-----	---
RAILROAD EQUIPMENT - - - -	600	500	-----	-----	-----	---
RAILROAD TRANSPORTATION -	200	200	-----	-----	-----	---
RAILWAY SERVICES - - - - -	-----	-----	-----	-----	-----	---
RAPID TRANSIT - - - - -	200	200	-----	-----	-----	---
OTHER - - - - -	100	-----	-----	-----	-----	---
UTILITIES - - - - -	15,200	11,400	300	-----	-----	---
THIS FIELD GENERALLY - - -	1,100	600	100	-----	-----	---
ELECTRIC UTILITIES - - - -	8,900	7,000	100	-----	-----	---
ELECTRIC AND GAS UTILITIES -	2,800	2,500	-----	-----	-----	---
GAS UTILITIES - - - - -	800	600	-----	-----	-----	---
SANITARY SERVICES - - - - -	100	100	-----	-----	-----	---
SEWERAGE, WASTE DISPOSAL SER	500	200	-----	-----	-----	---
WATER SUPPLY AND TREATMENT	800	200	-----	-----	-----	---
OTHER - - - - -	300	200	-----	-----	-----	---

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OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND TYPES OF EMPLOYER--CONTINUED

TYPES OF EMPLOYER

TOTAL	PRIVATE INDUSTRY OR BUSINESS	SELF- EM- PLOYED	COLLEGE OR UNIV.	JR.COL. OR TECH. INST.	SEC., ELEM., OTHER SCHOOL	NON- PROFIT ORG., OTHER THAN A SCHOOL	FEDERAL GOVT. CIVILIAN EMPLOYEE	USPHS, MILI- TARY SERVICE	STATE GOVT.	LOCAL GOVT.	OTHER	NO REPORT
5,200	2,800	-----	100	-----	-----	200	1,700	300	-----	-----	100	100
1,200	500	-----	-----	-----	-----	-----	500	100	-----	-----	-----	-----
300	100	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
500	300	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
2,100	1,400	-----	-----	-----	-----	-----	500	100	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	100	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
800	300	-----	100	-----	-----	100	300	-----	-----	-----	-----	-----
16,100	14,100	700	100	-----	-----	100	200	-----	100	-----	100	600
6,000	5,000	400	-----	-----	-----	-----	100	-----	-----	-----	-----	400
100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1,700	1,700	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
400	400	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
600	500	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1,400	1,300	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
300	300	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1,500	1,500	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2,400	2,100	100	-----	-----	-----	-----	100	-----	-----	-----	-----	100
1,200	1,000	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1,700	1,300	-----	-----	-----	-----	-----	-----	-----	-----	100	-----	100
500	300	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100
600	500	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
15,200	11,400	300	-----	-----	-----	100	600	-----	200	1,000	1,100	500
1,100	600	100	-----	-----	-----	-----	100	-----	100	100	-----	100
8,900	7,000	100	-----	-----	-----	100	300	-----	-----	400	600	400
2,800	2,500	-----	-----	-----	-----	-----	-----	-----	-----	100	200	100
800	600	-----	-----	-----	-----	-----	-----	-----	-----	-----	100	-----
100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
10	200	-----	-----	-----	-----	-----	-----	-----	-----	100	-----	-----
10	200	-----	-----	-----	-----	-----	100	-----	100	300	-----	-----
0	200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----



NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969  
NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND TYPES OF EMPLOYER

PRODUCTS OR SERVICES	TOTAL	TYPES OF EMPLOYER							
		PRIVATE INDUSTRY OR BUSINESS	SELF- EM- PLOYED	COLLEGE OR UNIV.	JR.COL. OR TECH. INST.	SEC., FLEM., OTHER SCHOOL	NON- PROFIT ORG., OTHER THAN A SCHOOL	FEDERAL GOVT. CIVILIAN EMPLOYEE	USP MI TA SER
PRODUCTS OR SERVICES, CONTINUED									
OTHER PRODUCTS, SERVICES	11,800	8,000	500	400	-----	-----	700	800	-----
ADVERTISING AND PROMOTION -	200	100	-----	-----	-----	-----	-----	-----	-----
BANKING AND FINANCE - - -	300	300	-----	-----	-----	-----	-----	-----	-----
BUILDING MAINTENANCE - - -	200	100	-----	-----	-----	-----	-----	-----	-----
BUSINESS FORMS - - - - -	-----	-----	-----	-----	-----	-----	-----	-----	-----
CLOTHING - - - - -	100	100	-----	-----	-----	-----	-----	-----	-----
INSURANCE - - - - -	600	500	-----	-----	-----	-----	100	-----	-----
LABORATORY SERVICES - - -	500	400	-----	-----	-----	-----	-----	-----	-----
LEATHER - - - - -	-----	-----	-----	-----	-----	-----	-----	-----	-----
LUMBER - - - - -	-----	-----	-----	-----	-----	-----	-----	-----	-----
PAPER - - - - -	600	500	-----	-----	-----	-----	-----	-----	-----
PAPER PRODUCTS - - - - -	400	400	-----	-----	-----	-----	-----	-----	-----
PATENTS AND LEGAL SERVICES	400	200	100	-----	-----	-----	-----	-----	-----
PERSONNEL SERVICES - - - -	300	200	-----	-----	-----	-----	-----	-----	-----
PRINTING, RELATED SERVICES	300	300	-----	-----	-----	-----	-----	-----	-----
PULP - - - - -	200	200	-----	-----	-----	-----	-----	-----	-----
REGULATORY SERVICES - - - -	400	-----	-----	-----	-----	-----	-----	100	-----
RETAIL TRADE SERVICES - - -	100	100	-----	-----	-----	-----	-----	-----	-----
RUBBER, FABRICATED PRODUCTS	400	400	-----	-----	-----	-----	-----	-----	-----
TEXTILES, TEXTILE PRODUCTS	600	600	-----	-----	-----	-----	-----	-----	-----
TIRES - - - - -	100	100	-----	-----	-----	-----	-----	-----	-----
TOYS AND AMUSEMENTS - - - -	-----	-----	-----	-----	-----	-----	-----	-----	-----
WHOLESALE TRADE SERVICES -	100	100	-----	-----	-----	-----	-----	-----	-----
WOOD PRODUCTS - - - - -	300	200	-----	-----	-----	-----	-----	-----	-----
OTHER PRODUCT - - - - -	1,600	1,300	-----	-----	-----	-----	100	100	-----
OTHER SERVICE - - - - -	3,800	1,800	300	200	-----	-----	300	500	2
NO REPORT - - - - -	1,200	700	-----	100	-----	-----	-----	100	-----

NOTE - GROUPS MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## MEETING CRITERIA BY PRODUCTS OR SERVICES AND TYPES OF EMPLOYER--CONTINUED

TYPES OF EMPLOYER										
PRIVATE INDUSTRY OR BUSINESS	SELF- EM- PLOYED	COLLEGE OR UNIV.	JR.COL. OR TECH. INST.	SEC., FLEM., OTHER SCHOOL	NON- PROFIT ORG., OTHER THAN A SCHOOL	FEDERAL GOVT. CIVILIAN EMPLOYEE	USPHS, MILI- TARY SERVICE	STATE GOVT.	LOCAL GOVT.	OTHER NO REPORT
8,000	500	400	-----	-----	700	800	200	300	100	300
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
300	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
500	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
400	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
500	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
400	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	100	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
300	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	100	-----	200	100	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
400	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
600	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1,300	-----	-----	-----	-----	100	100	-----	-----	-----	-----
1,800	300	200	-----	-----	300	500	200	100	100	100
700	-----	100	-----	-----	-----	100	-----	-----	-----	200

USE OF ROUNDING.

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND AREAS OF TECHNICAL EXPERTISE

PRODUCTS OR SERVICES	TOTAL	BIDMEDICAL	BEHAVIORAL AND SOCIAL	CHEMICAL AND MATERIALS	METALLUR- GICAL
ALL PRODUCTS OR SERVICES	308,000	1,600	4,100	11,700	12,100
AGRICULTURE AND FOOD - - -	4,200	200	100	100	-----
THIS FIELD GENERALLY - - -	800	-----	-----	-----	-----
AGRICULTURAL SERVICES - - -	600	-----	-----	-----	-----
ANIMALS - - - - -	100	-----	-----	-----	-----
DISTILLED PRODUCTS - - - -	100	-----	-----	-----	-----
FISH PRODUCTS - - - - -	-----	-----	-----	-----	-----
FORESTRY - - - - -	100	-----	-----	-----	-----
FOOD AND BEVERAGE PRODUCTS	1,400	-----	-----	-----	-----
NATURAL FIBERS - - - - -	100	-----	-----	-----	-----
PLANYS - - - - -	100	-----	-----	-----	-----
TOBACCO - - - - -	100	-----	-----	-----	-----
OTHER - - - - -	700	-----	-----	-----	-----
AIRCRAFT AND SPACE - - - -	33,800	200	100	1,100	600
THIS FIELD GENERALLY - - - -	6,100	-----	-----	200	100
AERONAUTICS - - - - -	2,400	-----	-----	-----	-----
AIRCRAFT - - - - -	4,900	-----	-----	100	100
AIRCRAFT V/STOL - - - - -	800	-----	-----	-----	-----
AIRCRAFT ENGINES - - - - -	2,800	-----	-----	200	200
AIRCRAFT PARTS, ACCESSORIES	1,900	-----	-----	100	100
AIRCRAFT SERVICES - - - - -	200	-----	-----	-----	-----
AIRLINES - - - - -	400	-----	-----	-----	-----
ASTRONAUTICS - - - - -	2,000	-----	-----	-----	-----
LAUNCH VEHICLES - - - - -	2,100	-----	-----	-----	-----
RE-ENTRY DEVICES - - - - -	1,500	-----	-----	100	-----
SPACECRAFT - - - - -	3,800	-----	-----	100	-----
SPACECRAFT ENGINES - - - - -	1,300	-----	-----	100	-----
SPACECRAFT PARTS, ACCESS.	700	-----	-----	-----	-----
SPACECRAFT SERVICES - - - -	300	-----	-----	-----	-----
OTHER - - - - -	2,500	-----	-----	-----	-----
CERAMICS - - - - -	2,200	-----	-----	400	100
THIS FIELD GENERALLY - - - -	200	-----	-----	100	-----
ABRASIVES - - - - -	100	-----	-----	-----	-----
CEMENT, CONCRETE, GYPSUM PROD	500	-----	-----	-----	-----
CLAY PRODUCTS - - - - -	100	-----	-----	-----	-----
GLASS PRODUCTS - - - - -	600	-----	-----	100	-----
INSULATION MATERIALS - - - -	100	-----	-----	-----	-----
REFRACTORIES - - - - -	300	-----	-----	100	100
RELATED SERVICES - - - - -	-----	-----	-----	-----	-----
OTHER - - - - -	200	-----	-----	100	-----

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OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND AREAS OF TECHNOLOGY

TOTAL	AREAS OF TECHNOLOGY							
	BIOMEDICAL	BEHAVIORAL AND SOCIAL	CHEMICAL AND MATERIALS	METALLUR- GICAL	EARTH, ATMOSPHERIC AND MARINE	ENVIRON- MENTAL AND STRUCTURAL	ELECTRO- MAGNETIC	DYNAMICS AND MECHANICS
0,000	1,600	4,100	11,700	12,100	9,900	33,700	42,800	40,100
200	200	100	100	-----	100	800	100	400
600	-----	-----	-----	-----	-----	200	-----	100
100	-----	-----	-----	-----	-----	300	-----	-----
100	-----	-----	-----	-----	-----	100	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----
400	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	100
100	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----
700	-----	-----	-----	-----	-----	-----	-----	100
800	200	100	1,100	600	200	2,100	2,300	9,900
100	-----	-----	200	100	-----	400	400	1,600
400	-----	-----	-----	-----	-----	100	100	1,300
900	-----	-----	100	100	-----	600	300	1,300
800	-----	-----	-----	-----	-----	100	-----	300
800	-----	-----	200	200	-----	-----	-----	1,100
900	-----	-----	100	100	-----	100	300	400
200	-----	-----	-----	-----	-----	-----	-----	100
400	-----	-----	-----	-----	-----	100	100	600
000	-----	-----	-----	-----	-----	100	100	600
100	-----	-----	-----	-----	-----	-----	100	500
500	-----	-----	100	-----	-----	-----	100	500
800	-----	-----	100	-----	-----	300	400	700
300	-----	-----	100	-----	-----	-----	100	200
700	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	100	100	300	500
200	-----	-----	400	100	100	300	100	200
00	-----	-----	100	-----	-----	-----	-----	-----
00	-----	-----	-----	-----	-----	200	-----	-----
00	-----	-----	100	-----	-----	-----	-----	100
00	-----	-----	100	100	-----	-----	-----	-----
00	-----	-----	100	-----	-----	-----	-----	-----
00	-----	-----	-----	-----	-----	-----	-----	-----

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NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND AREAS OF

PRODUCTS OR SERVICES	AREAS OF TECHNOLOGY					
	HEAT, LIGHT AND APPLIED PHYSICS	NUCLEAR	ENGINEERING PROCESSES AND APPLICATIONS	AUTOMATION AND CONTROL	WORK MANAGE- MENT AND EVALUATION	INFO MATH
ALL PRODUCTS OR SERVICES	8,500	2,600	32,100	12,400	56,500	1
AGRICULTURE AND FOOD - -	-----	-----	700	100	1,100	---
THIS FIELD GENERALLY - - -	-----	-----	100	-----	100	---
AGRICULTURAL SERVICES - - -	-----	-----	100	-----	-----	---
ANIMALS - - - - -	-----	-----	-----	-----	-----	---
DISTILLED PRODUCTS - - - -	-----	-----	-----	-----	-----	---
FISH PRODUCTS - - - - -	-----	-----	-----	-----	-----	---
FORESTRY - - - - -	-----	-----	-----	-----	-----	---
FOOD AND BEVERAGE PRODUCTS	-----	-----	300	-----	700	---
NATURAL FIBERS - - - - -	-----	-----	-----	-----	-----	---
PLANTS - - - - -	-----	-----	-----	-----	-----	---
TOBACCO - - - - -	-----	-----	-----	-----	-----	---
OTHER - - - - -	-----	-----	100	-----	100	---
AIRCRAFT AND SPACE - - -	1,600	100	2,000	2,300	7,600	---
THIS FIELD GENERALLY - - -	300	-----	500	300	1,500	---
AERONAUTICS - - - - -	100	-----	100	100	400	---
AIRCRAFT - - - - -	100	-----	500	200	1,000	---
AIRCRAFT V/STOL - - - - -	-----	-----	-----	100	200	---
AIRCRAFT ENGINES - - - - -	100	-----	100	200	400	---
AIRCRAFT PARTS, ACCESSORIES	-----	-----	100	300	500	---
AIRCRAFT SERVICES - - - - -	-----	-----	-----	-----	100	---
AIRLINES - - - - -	-----	-----	-----	-----	100	---
ASTRONAUTICS - - - - -	100	-----	100	200	500	---
LAUNCH VEHICLES - - - - -	100	-----	200	200	600	---
RE-ENTRY DEVICES - - - - -	200	-----	100	100	300	---
SPACECRAFT - - - - -	300	-----	200	400	1,200	---
SPACECRAFT ENGINES - - - -	100	-----	-----	100	100	---
SPACECRAFT PARTS, ACCESS.	100	-----	-----	100	200	---
SPACECRAFT SERVICES - - - -	-----	-----	-----	-----	100	---
OTHER - - - - -	200	-----	100	200	600	---
CERAMICS - - - - -	100	-----	200	100	500	---
THIS FIELD GENERALLY - - -	-----	-----	-----	-----	-----	---
ABRASIVES - - - - -	-----	-----	-----	-----	-----	---
CEMENT, CONCRETE, GYPSUM PROD	-----	-----	-----	-----	200	---
CLAY PRODUCTS - - - - -	-----	-----	-----	-----	-----	---
GLASS PRODUCTS - - - - -	-----	-----	-----	-----	200	---
INSULATION MATERIALS - - -	-----	-----	-----	-----	-----	---
REFRACTORIES - - - - -	-----	-----	-----	-----	-----	---
RELATED SERVICES - - - - -	-----	-----	-----	-----	-----	---
OTHER - - - - -	-----	-----	-----	-----	-----	---

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND AREAS OF TECHNOLOGY--CONTINUED

AREAS OF TECHNOLOGY							
HEAT, LIGHT AND APPLIED PHYSICS	NUCLEAR	ENGINEERING PROCESSES AND APPLICATIONS	AUTOMATION AND CONTROL	WORK MANAGE- MENT AND EVALUATION	INFORMATION AND MATHEMATICS	OTHER	NO REPORT
8,500	2,600	32,100	12,400	56,500	11,500	9,700	18,700
-----	-----	700	100	1,100	-----	300	300
-----	-----	100	-----	100	-----	100	100
-----	-----	100	-----	-----	-----	-----	100
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	300	-----	700	-----	100	-----
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	100	-----	100	-----	-----	-----
1,600	100	2,000	2,300	7,600	1,400	1,300	1,200
300	-----	500	300	1,500	200	300	300
100	-----	100	100	400	100	100	100
100	-----	500	200	1,000	300	300	100
-----	-----	-----	100	200	-----	-----	100
100	-----	100	200	400	100	-----	100
-----	-----	100	300	500	100	-----	-----
-----	-----	-----	-----	100	-----	-----	-----
-----	-----	-----	-----	100	-----	-----	-----
100	-----	100	200	500	100	100	100
100	-----	200	200	600	100	100	100
200	-----	100	100	300	100	-----	-----
300	-----	200	400	1,200	100	100	100
100	-----	-----	100	100	-----	-----	-----
100	-----	-----	100	200	-----	-----	-----
-----	-----	-----	-----	100	-----	-----	-----
200	-----	100	200	600	100	200	100
100	-----	200	100	500	-----	100	100
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	200	-----	-----	-----
-----	-----	-----	-----	200	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----
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-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL  
NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES

PRODUCTS OR SERVICES	TOTAL	BIOMEDICAL	BEHAVIORAL AND SOCIAL	CHEMICAL AND MATERIALS
PRODUCTS OR SERVICES, CONTINUED				
CHEMICALS, ALLIED PROD.	20,300	100	400	4,000
THIS FIELD GENERALLY - - -	4,300	-----	100	1,000
AGRICULTURAL CHEMICALS - -	500	-----	-----	100
CARBON PRODUCTS - - - - -	500	-----	-----	100
CHEMICAL SERVICES - - - - -	100	-----	-----	100
COSMETICS - - - - -	100	-----	-----	-----
DRUGS AND PHARMACEUTICALS -	800	-----	-----	100
DYES AND ORGANIC PIGMENTS -	100	-----	-----	-----
ELASTOMERS - - - - -	200	-----	-----	100
EXPLOSIVES - - - - -	300	-----	-----	-----
FERMENTATION PRODUCTS - -	100	-----	-----	-----
FERTILIZER - - - - -	300	-----	-----	100
GASES - - - - -	400	-----	-----	-----
INDUSTRIAL CHEMICALS - - -	1,900	-----	100	400
INORGANICS - - - - -	500	-----	-----	100
NUCLEAR, RADIOACT. MATERIALS	1,000	-----	-----	100
ORGANICS - - - - -	1,000	-----	-----	200
PAINTS AND COATINGS - - - -	300	-----	-----	200
PETROCHEMICALS - - - - -	2,200	-----	100	400
PHOTOGRAPHIC CHEMICALS - -	200	-----	-----	-----
PLASTICS, SYNTHETIC POLYMERS	2,700	-----	-----	500
PROPELLANTS - - - - -	300	-----	-----	100
SOAP AND DETERGENTS - - - -	400	-----	-----	100
SYNTHETIC FIBERS - - - - -	1,000	-----	-----	200
OTHER - - - - -	1,100	-----	-----	300
COMMUNICATIONS - - - - -	8,100	-----	100	100
THIS FIELD GENERALLY - - -	2,600	-----	-----	-----
BROADCASTING - - - - -	500	-----	-----	-----
CABLE TELEVISION - - - - -	100	-----	-----	-----
COMMUNICATION SERVICES - -	1,100	-----	-----	-----
MOTION PICTURES - - - - -	-----	-----	-----	-----
TELEGRAPH - - - - -	100	-----	-----	-----
TELEPHONE - - - - -	2,800	-----	100	-----
OTHER - - - - -	800	-----	-----	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND AREAS OF TECHNOLOGY--CONTINUED

SERVICES	TOTAL	AREAS OF TECHNOLOGY							
		BIOMEDICAL	BEHAVIORAL AND SOCIAL	CHEMICAL AND MATERIALS	METALLUR- GICAL	EARTH, ATMOSPHERIC AND MARINE	ENVIRON- MENTAL AND STRUCTURAL	ELECTRO- MAGNETIC	DYNAMICS AND MECHANICS
PROD.	20,300	100	400	4,000	200	100	400	300	1,400
- - -	4,300	-----	100	1,000	-----	-----	100	100	200
LS - - -	500	-----	-----	100	-----	-----	-----	-----	-----
- - -	500	-----	-----	100	-----	-----	-----	-----	-----
- - -	100	-----	-----	100	-----	-----	-----	-----	-----
- - -	100	-----	-----	-----	-----	-----	-----	-----	-----
ICALS -	800	-----	-----	100	-----	-----	-----	-----	-----
MENTS -	100	-----	-----	-----	-----	-----	-----	-----	-----
- - -	200	-----	-----	100	-----	-----	-----	-----	-----
- - -	300	-----	-----	-----	-----	-----	-----	-----	100
S - - -	100	-----	-----	-----	-----	-----	-----	-----	-----
- - -	300	-----	-----	100	-----	-----	-----	-----	-----
- - -	400	-----	-----	-----	-----	-----	-----	-----	-----
- - -	1,900	-----	100	400	-----	-----	-----	-----	100
- - -	500	-----	-----	100	-----	-----	-----	-----	-----
TERIALS	1,000	-----	-----	100	-----	-----	-----	-----	100
- - -	1,000	-----	-----	200	-----	-----	-----	-----	-----
- - -	300	-----	-----	200	-----	-----	-----	-----	-----
- - -	2,200	-----	100	400	-----	-----	-----	-----	100
S - - -	200	-----	-----	-----	-----	-----	-----	-----	-----
OLYMERS	2,700	-----	-----	500	-----	-----	-----	-----	200
- - -	300	-----	-----	100	-----	-----	-----	-----	100
- - -	400	-----	-----	100	-----	-----	-----	-----	-----
- - -	1,000	-----	-----	200	-----	-----	-----	-----	200
- - -	1,100	-----	-----	300	-----	-----	-----	-----	100
- - -	8,100	-----	100	100	-----	-----	-----	5,200	100
- - -	2,600	-----	-----	-----	-----	-----	-----	1,700	-----
- - -	500	-----	-----	-----	-----	-----	-----	400	-----
- - -	100	-----	-----	-----	-----	-----	-----	-----	-----
ES - - -	1,100	-----	-----	-----	-----	-----	-----	800	-----
- - -	-----	-----	-----	-----	-----	-----	-----	-----	-----
- - -	100	-----	-----	-----	-----	-----	-----	100	-----
- - -	2,800	-----	100	-----	-----	-----	-----	1,700	100
- - -	800	-----	-----	-----	-----	-----	-----	500	-----



NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND AREAS OF TECHNOLOGY

PRODUCTS OR SERVICES	HEAT, LIGHT AND APPLIED PHYSICS	NUCLEAR	ENGINEERING PROCESSES AND APPLICATIONS	AUTOMATION AND CONTROL	WORK MANAGE- MENT AND EVALUATION
PRODUCTS OR SERVICES, CONTINUED					
CHEMICALS, ALLIED PROD.	600	300	3,900	800	5,600
THIS FIELD GENERALLY - - -	100	-----	800	200	800
AGRICULTURAL CHEMICALS - -	-----	-----	200	-----	100
CARBON PRODUCTS - - - - -	-----	-----	100	-----	100
CHEMICAL SERVICES - - - - -	-----	-----	-----	-----	-----
COSMETICS - - - - -	-----	-----	-----	-----	100
DRUGS AND PHARMACEUTICALS -	-----	-----	100	-----	400
DYES AND ORGANIC PIGMENTS -	-----	-----	-----	-----	100
ELASTOMERS - - - - -	-----	-----	100	-----	100
EXPLOSIVES - - - - -	-----	-----	-----	-----	100
FERMENTATION PRODUCTS - -	-----	-----	-----	-----	-----
FERTILIZER - - - - -	-----	-----	100	-----	100
GASES - - - - -	200	-----	-----	-----	100
INDUSTRIAL CHEMICALS - - -	-----	-----	300	100	700
INORGANICS - - - - -	-----	-----	100	-----	100
NUCLEAR, RADIOACT. MATERIALS	-----	300	100	100	200
ORGANICS - - - - -	-----	-----	300	-----	300
PAINTS AND COATINGS - - -	-----	-----	-----	-----	100
PETROCHEMICALS - - - - -	-----	-----	600	100	500
PHOTOGRAPHIC CHEMICALS - -	100	-----	-----	-----	100
PLASTICS, SYNTHETIC POLYMERS	-----	-----	600	100	900
PROPELLANTS - - - - -	-----	-----	-----	-----	-----
SOAP AND DETERGENTS - - -	-----	-----	100	-----	200
SYNTHETIC FIBERS - - - - -	-----	-----	200	-----	400
OTHER - - - - -	100	-----	100	-----	200
COMMUNICATIONS - - - - -	100	-----	300	100	1,300
THIS FIELD GENERALLY - - -	-----	-----	100	-----	400
BROADCASTING - - - - -	-----	-----	-----	-----	-----
CABLE TELEVISION - - - - -	-----	-----	-----	-----	-----
COMMUNICATION SERVICES - -	-----	-----	-----	-----	100
MOTION PICTURES - - - - -	-----	-----	-----	-----	-----
TELEGRAPH - - - - -	-----	-----	-----	-----	-----
TELEPHONE - - - - -	-----	-----	100	-----	500
OTHER - - - - -	-----	-----	-----	-----	200

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## MEETING CRITERIA BY PRODUCTS OR SERVICES AND AREAS OF TECHNOLOGY--CONTINUED

	AREAS OF TECHNOLOGY						
AND ED S	NUCLEAR	ENGINEERING PROCESSES AND APPLICATIONS	AUTOMATION AND CONTROL	WORK MANAGE- MENT AND EVALUATION	INFORMATION AND MATHEMATICS	OTHER	NO REPORT
	300	3,900	800	5,600	300	1,000	1,100
	-----	800	200	800	100	200	500
	-----	200	-----	100	-----	-----	-----
	-----	100	-----	100	-----	-----	-----
	-----	-----	-----	-----	-----	-----	-----
	-----	-----	-----	100	-----	-----	-----
	-----	100	-----	400	-----	-----	-----
	-----	-----	-----	100	-----	-----	-----
	-----	100	-----	100	-----	-----	-----
	-----	-----	-----	100	-----	-----	-----
	-----	-----	-----	-----	-----	-----	-----
	-----	100	-----	100	-----	-----	-----
	-----	-----	-----	100	-----	-----	-----
	-----	300	100	700	-----	100	100
	-----	100	-----	100	-----	100	-----
	300	100	100	200	-----	-----	-----
	-----	300	-----	300	-----	-----	-----
	-----	-----	-----	100	-----	-----	-----
	-----	600	100	500	-----	100	100
	-----	-----	-----	100	-----	-----	-----
	-----	600	100	900	-----	200	100
	-----	-----	-----	-----	-----	-----	-----
	-----	100	-----	200	-----	-----	-----
	-----	200	-----	400	-----	100	-----
	-----	100	-----	200	-----	100	100
	-----	-----	-----	-----	-----	-----	-----
	-----	300	100	1,300	200	200	400
	-----	100	-----	400	100	100	100
	-----	-----	-----	-----	-----	-----	-----
	-----	-----	-----	100	-----	-----	100
	-----	-----	-----	-----	-----	-----	-----
	-----	100	-----	500	100	-----	200
	-----	-----	-----	200	-----	-----	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL  
NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES

PRODUCTS OR SERVICES	TOTAL	BIOMEDICAL	BEHAVIORAL AND SOCIAL	CHEMICAL AND MATERIALS
PRODUCTS OR SERVICES, CONTINUED				
COMPUTERS - - - - -	11,100	-----	-----	100
THIS FIELD GENERALLY - - -	4,000	-----	-----	-----
ANALOG EQUIPMENT - - - - -	200	-----	-----	-----
COMPONENTS AND PARTS - - -	400	-----	-----	-----
COMPUTER SERVICES - - - - -	1,000	-----	-----	-----
DIGITAL EQUIPMENT - - - - -	1,900	-----	-----	-----
HYBRID EQUIPMENT - - - - -	200	-----	-----	-----
MEMORY UNITS - - - - -	300	-----	-----	-----
OPTICAL EQUIPMENT - - - - -	100	-----	-----	-----
PERIPHERAL EQUIPMENT - - -	1,100	-----	-----	-----
SOFTWARE - - - - -	1,400	-----	-----	-----
OTHER - - - - -	500	-----	-----	-----
CONSTRUCTION, CIVIL ENGR. -	49,200	100	200	500
THIS FIELD GENERALLY - - -	10,600	-----	100	-----
AIRPORTS AND FACILITIES - -	700	-----	-----	-----
ARCHITECTURE - - - - -	600	-----	-----	-----
BRIDGES - - - - -	2,200	-----	-----	-----
BUILDINGS AND STRUCTURES - -	8,100	-----	100	100
CHEMICAL PLANTS, FACILITIES -	1,700	-----	-----	100
CITY, REGION, URBAN PLANNING -	700	-----	-----	-----
CONSTRUCTION SERVICES - - -	900	-----	-----	-----
DAMS, WATER CONTROL STRUCT. -	2,600	-----	-----	-----
EXCAVATION AND FOUNDATION -	700	-----	-----	-----
HEAVY CONSTRUCTION - - - -	1,100	-----	-----	-----
HIGHWAYS - - - - -	5,200	-----	-----	100
HYDRO-ELECTRIC FACILITIES -	500	-----	-----	-----
INDUST. PLANTS, FACILITIES -	2,100	-----	-----	-----
LANDSCAPING - - - - -	-----	-----	-----	-----
MILITARY CONSTRUCTION - - -	1,200	-----	-----	-----
PREFABRICATED CONSTRUCTION -	300	-----	-----	-----
PUBLIC WORKS - - - - -	2,700	-----	-----	-----
RECREATIONAL FACILITIES - -	100	-----	-----	-----
RIVERS AND HARBORS - - - -	500	-----	-----	-----
SANITARY FACILITIES - - - -	1,900	-----	-----	-----
SPACECRAFT, MISSILE FACILIT. -	200	-----	-----	-----
SURVEYING AND MAPPING - - -	700	-----	-----	-----
THIN-SHELL CONSTRUCTION - -	100	-----	-----	-----
TUNNELING - - - - -	200	-----	-----	-----
WATER SUPPLY AND TREATMENT -	1,400	-----	-----	-----
OTHER - - - - -	2,200	-----	-----	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND AREAS OF TECHNOLOGY--CONTINUED

TOTAL	AREAS OF TECHNOLOGY							
	BIOMEDICAL	BEHAVIORAL AND SOCIAL	CHEMICAL AND MATERIALS	METALLUR- GICAL	EARTH, ATMOSPHERIC AND MARINE	ENVIRON- MENTAL AND STRUCTURAL	ELECTRO- MAGNETIC	DYNAMICS AND MECHANICS
11,100	-----	-----	100	100	100	100	1,700	300
4,000	-----	-----	-----	-----	-----	-----	400	-----
200	-----	-----	-----	-----	-----	-----	-----	-----
400	-----	-----	-----	-----	-----	-----	100	-----
1,000	-----	-----	-----	-----	-----	-----	-----	-----
1,900	-----	-----	-----	-----	-----	-----	500	-----
200	-----	-----	-----	-----	-----	-----	-----	-----
300	-----	-----	-----	-----	-----	-----	200	-----
100	-----	-----	-----	-----	-----	-----	-----	-----
1,100	-----	-----	-----	-----	-----	-----	300	100
1,400	-----	-----	-----	-----	-----	-----	-----	-----
500	-----	-----	-----	-----	-----	-----	-----	-----
49,200	100	200	500	100	1,500	20,400	900	3,000
10,600	-----	100	-----	-----	200	3,200	300	500
700	-----	-----	-----	-----	-----	300	-----	-----
600	-----	-----	-----	-----	-----	200	-----	100
2,200	-----	-----	-----	-----	-----	1,300	-----	-----
8,100	-----	100	100	-----	-----	4,400	100	500
1,700	-----	-----	100	-----	-----	200	-----	100
700	-----	-----	-----	-----	-----	300	-----	-----
900	-----	-----	-----	-----	-----	300	-----	100
2,600	-----	-----	-----	-----	300	1,200	-----	400
700	-----	-----	-----	-----	100	400	-----	-----
1,100	-----	-----	-----	-----	-----	400	-----	-----
5,200	-----	-----	100	-----	-----	2,400	-----	100
500	-----	-----	-----	-----	-----	100	100	100
2,100	-----	-----	-----	-----	-----	400	100	200
1,200	-----	-----	-----	-----	-----	200	-----	100
300	-----	-----	-----	-----	-----	200	-----	-----
2,700	-----	-----	-----	-----	100	900	-----	200
100	-----	-----	-----	-----	-----	100	-----	-----
500	-----	-----	-----	-----	-----	100	-----	100
1,900	-----	-----	-----	-----	-----	1,500	-----	-----
200	-----	-----	-----	-----	-----	100	-----	-----
700	-----	-----	-----	-----	-----	500	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----
200	-----	-----	-----	-----	100	-----	-----	-----
1,400	-----	-----	-----	-----	100	800	-----	100
2,200	-----	-----	-----	-----	300	800	100	200

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND AREAS OF TECHNOLOGY

AREAS OF TECHNOLOGY

PRODUCTS OR SERVICES	HEAT, LIGHT AND APPLIED PHYSICS	NUCLEAR	ENGINEERING PROCESSES AND APPLICATIONS	AUTOMATION AND CONTROL	WORK MANAGE- MENT AND EVALUATION
PRODUCTS OR SERVICES, CONTINUED					
COMPUTERS - - - - -	100	-----	300	500	2,300
THIS FIELD GENERALLY - - -	-----	-----	100	200	900
ANALOG EQUIPMENT - - - - -	-----	-----	-----	-----	-----
COMPONENTS AND PARTS - - -	-----	-----	-----	-----	200
COMPUTER SERVICES - - - - -	-----	-----	-----	-----	100
DIGITAL EQUIPMENT - - - - -	-----	-----	-----	100	300
HYBRID EQUIPMENT - - - - -	-----	-----	-----	-----	-----
MEMORY UNITS - - - - -	-----	-----	-----	-----	-----
OPTICAL EQUIPMENT - - - - -	-----	-----	-----	-----	-----
PERIPHERAL EQUIPMENT - - -	-----	-----	-----	-----	200
SOFTWARE - - - - -	-----	-----	-----	100	300
OTHER - - - - -	-----	-----	-----	-----	200
CONSTRUCTION, CIVIL ENGR. -	200	100	10,000	500	5,300
THIS FIELD GENERALLY - - -	-----	-----	3,000	100	1,000
AIRPORTS AND FACILITIES - -	-----	-----	200	-----	100
ARCHITECTURE - - - - -	-----	-----	100	-----	100
BRIDGES - - - - -	-----	-----	400	-----	100
BUILDINGS AND STRUCTURES -	100	-----	1,100	-----	700
CHEMICAL PLANTS, FACILITIES -	-----	-----	400	100	600
CITY, REGION, URBAN PLANNING -	-----	-----	100	-----	100
CONSTRUCTION SERVICES - - -	-----	-----	200	-----	200
DAMS, WATER CONTROL STRUCT. -	-----	-----	300	-----	100
EXCAVATION AND FOUNDATION -	-----	-----	100	-----	-----
HEAVY CONSTRUCTION - - - - -	-----	-----	200	-----	200
HIGHWAYS - - - - -	-----	-----	1,500	100	400
HYDRO-ELECTRIC FACILITIES -	-----	-----	100	-----	-----
INDUST. PLANTS, FACILITIES -	-----	-----	400	-----	800
LANDSCAPING - - - - -	-----	-----	-----	-----	-----
MILITARY CONSTRUCTION - - -	-----	-----	500	-----	200
PREFABRICATED CONSTRUCTION -	-----	-----	-----	-----	100
PUBLIC WORKS - - - - -	-----	-----	900	-----	300
RECREATIONAL FACILITIES - -	-----	-----	100	-----	-----
RIVERS AND HARBORS - - - - -	-----	-----	100	-----	-----
SANITARY FACILITIES - - - - -	-----	-----	100	-----	-----
SPACECRAFT, MISSILE FACILIT. -	-----	-----	-----	-----	100
SURVEYING AND MAPPING - - -	-----	-----	100	-----	-----
THIN-SHELL CONSTRUCTION - -	-----	-----	-----	-----	-----
TUNNELING - - - - -	-----	-----	-----	-----	-----
WATER SUPPLY AND TREATMENT -	-----	-----	100	-----	100
OTHER - - - - -	-----	-----	200	-----	200

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND AREAS OF TECHNOLOGY--CONTINUED

PRODUCTS OR SERVICES	AREAS OF TECHNOLOGY							NO REPORT
	HEAT, LIGHT AND APPLIED PHYSICS	NUCLEAR	ENGINEERING PROCESSES AND APPLICATIONS	AUTOMATION AND CONTROL	WORK MANAGEMENT AND EVALUATION	INFORMATION AND MATHEMATICS	OTHER	
CONTINUED								
	100	-----	300	500	2,300	5,100	200	300
	-----	-----	100	200	900	2,000	100	100
	-----	-----	-----	-----	-----	-----	-----	-----
	-----	-----	-----	-----	200	-----	-----	-----
	-----	-----	-----	-----	100	700	-----	-----
	-----	-----	-----	100	300	800	-----	-----
	-----	-----	-----	-----	-----	100	-----	-----
	-----	-----	-----	-----	-----	100	-----	-----
	-----	-----	-----	-----	200	200	-----	-----
	-----	-----	-----	100	300	900	-----	-----
	-----	-----	-----	-----	200	200	-----	-----
ENGR.	200	100	10,000	500	5,300	700	1,400	4,200
	-----	-----	3,000	100	1,000	100	400	1,500
	-----	-----	200	-----	100	-----	-----	-----
	-----	-----	100	-----	100	100	-----	100
	-----	-----	400	-----	100	100	-----	200
ES	100	-----	1,100	-----	700	200	200	600
TIES	-----	-----	400	100	600	-----	-----	100
UNING	-----	-----	100	-----	100	-----	100	100
	-----	-----	200	-----	200	-----	-----	100
DUCT.	-----	-----	300	-----	100	-----	100	100
ON	-----	-----	100	-----	-----	-----	-----	-----
	-----	-----	200	-----	200	-----	-----	100
	-----	-----	1,500	100	400	100	200	400
ES	-----	-----	100	-----	-----	-----	-----	100
IFS	-----	-----	400	-----	800	-----	-----	100
	-----	-----	-----	-----	-----	-----	-----	-----
	-----	-----	500	-----	200	-----	-----	100
ION	-----	-----	-----	-----	100	-----	-----	-----
	-----	-----	900	-----	300	-----	100	200
	-----	-----	100	-----	-----	-----	-----	-----
	-----	-----	100	-----	-----	-----	-----	-----
	-----	-----	100	-----	-----	-----	-----	100
LIT.	-----	-----	-----	-----	100	-----	-----	-----
	-----	-----	100	-----	-----	-----	-----	100
	-----	-----	-----	-----	-----	-----	-----	-----
ENT	-----	-----	100	-----	100	-----	-----	100
	-----	-----	200	-----	200	-----	100	100

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL  
NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND AREA

PRODUCTS OR SERVICES	TOTAL	BIOMEDICAL	BEHAVIORAL AND SOCIAL	CHEMICAL AND MATERIALS	MECHANICAL
PRODUCTS OR SERVICES, CONTINUED					
EDUC., INFORMATION SERV.	15,400	100	1,600	500	
THIS FIELD GENERALLY - - -	2,500	-----	400	100	
ENGINEERING INSTRUCTION - -	10,400	100	800	400	
INFORMATION SERVICES - - -	400	-----	-----	-----	
LIBRARIES - - - - -	-----	-----	-----	-----	
TECHNICAL INSTRUCTION - - -	1,200	-----	300	-----	
OTHER - - - - -	900	-----	100	-----	
ELECTRICAL EQUIP., SERV.	20,400	-----	-----	400	
THIS FIELD GENERALLY - - -	4,100	-----	-----	100	
BUSINESS, OFFICE EQUIPMENT	600	-----	-----	-----	
COMPONENTS AND ACCESSORIES	800	-----	-----	-----	
CONTROLS - - - - -	1,500	-----	-----	-----	
ELECTRICAL SERVICES - - -	400	-----	-----	-----	
HOUSEHOLD APPLIANCES - - -	600	-----	-----	-----	
INDUSTRIAL ELEC. EQUIPMENT	2,800	-----	-----	-----	
INSTRUMENTS, TEST EQUIPMENT	1,300	-----	-----	-----	
INSULATED CONDUCTORS - - -	400	-----	-----	-----	
LIGHTING AND WIRING - - -	500	-----	-----	-----	
MAGNETIC DEVICES - - - -	300	-----	-----	-----	
POWER GENERATION - - - -	2,200	-----	-----	100	
RURAL ELECTRIFICATION - - -	200	-----	-----	-----	
STORAGE BATTERIES - - - -	100	-----	-----	100	
SWITCHGEAR - - - - -	600	-----	-----	-----	
TELEPHONE EQUIPMENT - - -	600	-----	-----	-----	
TRANSFORMERS - - - - -	900	-----	-----	-----	
TRANSMISSION, DISTRIBUTION	1,700	-----	-----	-----	
WELDING APPARATUS - - - -	200	-----	-----	-----	
OTHER - - - - -	800	-----	-----	-----	

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NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND AREAS OF TECHNOLOGY--CONTINUED

PRODUCTS OR SERVICES	TOTAL	AREAS OF TECHNOLOGY							
		BIOMEDICAL	BEHAVIORAL AND SOCIAL	CHEMICAL AND MATERIALS	METALLUR- GICAL	EARTH, ATMOSPHERIC AND MARINE	ENVIRON- MENTAL AND STRUCTURAL	ELECTRO- MAGNETIC	DYNAMICS AND MECHANICS
CONTINUED									
SERV.	15,400	100	1,600	500	500	400	1,600	1,300	3,200
- - -	2,500	-----	400	100	100	100	200	100	200
N - -	10,400	100	800	400	300	200	1,300	1,000	2,800
- - -	400	-----	-----	-----	-----	-----	-----	-----	-----
- - -	-----	-----	-----	-----	-----	-----	-----	-----	-----
- - -	1,200	-----	300	-----	100	-----	100	100	100
- - -	900	-----	100	-----	-----	-----	100	-----	-----
SERV.	20,400	-----	-----	400	300	-----	200	10,500	1,100
- - -	4,100	-----	-----	100	-----	-----	-----	2,600	100
MENT	600	-----	-----	-----	-----	-----	-----	200	100
RIES	800	-----	-----	-----	-----	-----	-----	400	100
- - -	1,500	-----	-----	-----	-----	-----	-----	500	-----
- - -	400	-----	-----	-----	-----	-----	-----	300	-----
- - -	600	-----	-----	-----	-----	-----	-----	100	100
MENT	2,800	-----	-----	-----	-----	-----	-----	1,800	100
PMENT	1,300	-----	-----	-----	-----	-----	-----	300	-----
- - -	400	-----	-----	-----	-----	-----	-----	300	-----
- - -	500	-----	-----	-----	-----	-----	-----	200	-----
- - -	300	-----	-----	-----	-----	-----	-----	200	-----
- - -	2,200	-----	-----	100	-----	-----	-----	800	400
- - -	200	-----	-----	-----	-----	-----	-----	100	-----
- - -	100	-----	-----	100	-----	-----	-----	-----	-----
- - -	600	-----	-----	-----	-----	-----	-----	400	-----
- - -	600	-----	-----	-----	-----	-----	-----	200	-----
- - -	900	-----	-----	-----	-----	-----	-----	500	-----
TION	1,700	-----	-----	-----	-----	-----	-----	1,300	-----
- - -	200	-----	-----	-----	100	-----	-----	-----	-----
- - -	800	-----	-----	-----	-----	-----	-----	400	100



NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND AREAS OF TECHNOLOGY

PRODUCTS OR SERVICES	HEAT, LIGHT AND APPLIED PHYSICS	NUCLEAR	ENGINEERING PROCESSES AND APPLICATIONS	AUTOMATION AND CONTROL	WORK MANAGE- MENT AND EVALUATION
PRODUCTS OR SERVICES, CONTINUED					
EDUC., INFORMATION SERV.	800	200	1,000	300	1,200
THIS FIELD GENERALLY - - -	100	100	200	-----	300
ENGINEERING INSTRUCTION - -	600	100	600	200	700
INFORMATION SERVICES - - -	-----	-----	-----	-----	100
LIBRARIES - - - - -	-----	-----	-----	-----	-----
TECHNICAL INSTRUCTION - - -	-----	-----	100	-----	100
OTHER - - - - -	-----	-----	100	-----	200
ELECTRICAL EQUIP., SERV.					
THIS FIELD GENERALLY - - -	400	300	600	1,700	2,800
BUSINESS, OFFICE EQUIPMENT	-----	-----	100	200	200
COMPONENTS AND ACCESSORIES	-----	-----	-----	-----	200
CONTROLS - - - - -	-----	-----	-----	500	200
ELECTRICAL SERVICES - - -	-----	-----	-----	-----	-----
HOUSEHOLD APPLIANCES - - -	-----	-----	100	-----	300
INDUSTRIAL ELEC. EQUIPMENT	-----	-----	100	200	400
INSTRUMENTS, TEST EQUIPMENT	-----	-----	-----	600	100
INSULATED CONDUCTORS - - -	-----	-----	-----	-----	100
LIGHTING AND WIRING - - -	200	-----	-----	-----	100
MAGNETIC DEVICES - - - -	-----	-----	-----	-----	-----
POWER GENERATION - - - -	-----	300	100	100	200
RURAL ELECTRIFICATION - - -	-----	-----	-----	-----	-----
STORAGE BATTERIES - - - -	-----	-----	-----	-----	-----
SWITCHGEAR - - - - -	-----	-----	-----	-----	100
TELEPHONE EQUIPMENT - - -	-----	-----	-----	-----	200
TRANSFORMERS - - - - -	-----	-----	-----	-----	200
TRANSMISSION, DISTRIBUTION	-----	-----	-----	-----	100
WELDING APPARATUS - - - -	-----	-----	-----	-----	-----
OTHER - - - - -	-----	-----	-----	-----	100

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND AREAS OF TECHNOLOGY--CONTINUED

	HEAT, LIGHT AND APPLIED PHYSICS	NUCLEAR	ENGINEERING PROCESSES AND APPLICATIONS	AUTOMATION AND CONTROL	WORK MANAGE- MENT AND EVALUATION	INFORMATION AND MATHEMATICS	OTHER	NO REPORT
CONTINUED								
V.	800	200	1,000	300	1,200	1,000	500	1,100
-	100	100	200	-----	300	100	200	200
-	600	100	600	200	700	500	200	600
-	-----	-----	-----	-----	100	100	-----	-----
-	-----	-----	-----	-----	-----	-----	-----	-----
-	-----	-----	100	-----	100	100	-----	100
-	-----	-----	100	-----	200	100	100	100
V.	400	300	600	1,700	2,800	200	300	1,500
-	-----	-----	100	200	200	-----	100	700
T	-----	-----	-----	-----	200	-----	-----	-----
S	-----	-----	-----	-----	200	-----	-----	-----
-	-----	-----	-----	500	200	-----	-----	-----
-	-----	-----	-----	-----	-----	-----	-----	-----
-	-----	-----	100	-----	300	-----	-----	-----
T	-----	-----	100	200	400	-----	-----	100
NT	-----	-----	-----	600	100	-----	-----	100
-	-----	-----	-----	-----	100	-----	-----	-----
-	200	-----	-----	-----	100	-----	-----	-----
-	-----	-----	-----	-----	-----	-----	-----	-----
-	-----	300	100	100	200	-----	-----	100
-	-----	-----	-----	-----	-----	-----	-----	-----
-	-----	-----	-----	-----	100	-----	-----	-----
-	-----	-----	-----	-----	200	-----	-----	-----
-	-----	-----	-----	-----	200	-----	-----	100
N	-----	-----	-----	-----	100	-----	-----	100
-	-----	-----	-----	-----	-----	-----	-----	-----
-	-----	-----	-----	-----	100	-----	-----	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL  
NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND AREA

PRODUCTS OR SERVICES	TOTAL	BIOMEDICAL	BEHAVIORAL AND SOCIAL	CHEMICAL AND MATERIALS	MET G
PRODUCTS OR SERVICES, CONTINUED					
ELECTRONIC EQUIP., SERV.	23,500	100	100	200	
THIS FIELD GENERALLY - - -	5,500	-----	-----	-----	---
ANTENNAS - - - - -	700	-----	-----	-----	---
AUDIO - - - - -	200	-----	-----	-----	---
COMPONENTS AND ACCESSORIES	900	-----	-----	-----	---
CONTROLS - - - - -	1,000	-----	-----	-----	---
ELECTROACOUSTIC TRANSDUCERS	-----	-----	-----	-----	---
ELECTRO-OPTICAL DEVICES - -	900	-----	-----	-----	---
ELECTRON TUBES - - - - -	800	-----	-----	-----	---
ELECTRONIC EQUIP. GENERALLY	3,300	-----	-----	-----	---
ELECTRONIC SERVICES - - - -	200	-----	-----	-----	---
INSTRUMENTS, TEST EQUIPMENT	2,700	-----	-----	-----	---
INTEGRATED CIRCUITS - - - -	700	-----	-----	-----	---
LASERS - - - - -	200	-----	-----	-----	---
MICROWAVE AND RADAR - - - -	2,600	-----	-----	-----	---
RADIO AND TV RECEIVERS - -	400	-----	-----	-----	---
RADIO AND TV TRANSMITTERS -	100	-----	-----	-----	---
RECORDING - - - - -	200	-----	-----	-----	---
SEMICONDUCTOR DEVICES - - -	1,000	-----	-----	-----	---
SONAR - - - - -	600	-----	-----	-----	---
SONIC, ULTRASONIC DEVICES -	100	-----	-----	-----	---
THERMO-ELECTRIC DEVICES - -	100	-----	-----	-----	---
X-RAY - - - - -	100	-----	-----	-----	---
OTHER - - - - -	1,200	-----	-----	-----	---
LAB-SCI-PHOTO-OPT EQUIP.	2,900	100	-----	100	---
THIS FIELD GENERALLY - - -	700	-----	-----	-----	---
LAB., SCIENTIFIC APPARATUS	500	-----	-----	-----	---
MEASURING, CONTROL INSTRUM.	800	-----	-----	-----	---
OPTICAL INSTRUMENTS, LENSES	200	-----	-----	-----	---
PHOTOGRAPHIC EQUIPMENT - -	300	-----	-----	-----	---
TEMPERATURE MEASUREMENT - -	200	-----	-----	-----	---
TIMING DEVICES - - - - -	-----	-----	-----	-----	---
OTHER - - - - -	200	-----	-----	-----	---

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND AREAS OF TECHNOLOGY--CONTINUED

TOTAL	AREAS OF TECHNOLOGY							
	BIOMEDICAL	BEHAVIORAL AND SOCIAL	CHEMICAL AND MATERIALS	METALLUR- GICAL	EARTH, ATMOSPHERIC AND MARINE	ENVIRON- MENTAL AND STRUCTURAL	ELECTRO- MAGNETIC	DYNAMICS AND MECHANICS
23,500	100	100	200	100	200	100	10,000	800
5,500	-----	-----	-----	-----	100	-----	2,800	100
700	-----	-----	-----	-----	-----	-----	400	-----
200	-----	-----	-----	-----	-----	-----	-----	-----
900	-----	-----	-----	-----	-----	-----	400	-----
1,000	-----	-----	-----	-----	-----	-----	200	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----
900	-----	-----	-----	-----	-----	-----	400	-----
800	-----	-----	-----	-----	-----	-----	300	100
3,300	-----	-----	-----	-----	-----	-----	1,600	100
200	-----	-----	-----	-----	-----	-----	100	-----
2,700	-----	-----	-----	-----	-----	-----	800	100
700	-----	-----	-----	-----	-----	-----	300	-----
200	-----	-----	-----	-----	-----	-----	100	-----
2,600	-----	-----	-----	-----	-----	-----	1,400	100
400	-----	-----	-----	-----	-----	-----	200	-----
100	-----	-----	-----	-----	-----	-----	100	-----
200	-----	-----	-----	-----	-----	-----	100	-----
1,000	-----	-----	-----	-----	-----	-----	200	-----
600	-----	-----	-----	-----	100	-----	100	-----
100	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----
1,200	-----	-----	-----	-----	-----	-----	400	100
2,900	100	-----	100	-----	100	100	200	300
700	-----	-----	-----	-----	-----	-----	-----	100
500	-----	-----	-----	-----	-----	-----	100	100
800	-----	-----	-----	-----	-----	-----	100	100
200	-----	-----	-----	-----	-----	-----	-----	-----
300	-----	-----	-----	-----	-----	-----	-----	-----
200	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----
200	-----	-----	-----	-----	-----	-----	-----	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND AREAS OF TECHNOLOGY

PRODUCTS OR SERVICES	HEAT, LIGHT AND APPLIED PHYSICS	NUCLEAR	ENGINEERING PROCESSES AND APPLICATIONS	AUTOMATION AND CONTROL	WORK MANAGE- MENT AND EVALUATION
PRODUCTS OR SERVICES, CONTINUED					
ELECTRONIC EQUIP., SERV. THIS FIELD GENERALLY - - -	1,300 100	100 -----	1,300 400	2,400 300	4,900 1,200
ANTENNAS - - - - -	-----	-----	100	-----	-----
AUDIO - - - - -	100	-----	-----	-----	-----
COMPONENTS AND ACCESSORIES CONTROLS - - - - -	-----	-----	-----	-----	300
ELECTROACOUSTIC TRANSDUCERS	-----	-----	-----	400	200
ELECTRO-OPTICAL DEVICES - -	100	-----	-----	-----	100
ELECTRON TUBES - - - - -	-----	-----	100	-----	200
ELECTRONIC EQUIP. GENERALLY	100	-----	200	200	700
ELECTRONIC SERVICES - - - -	-----	-----	-----	-----	-----
INSTRUMENTS, TEST EQUIPMENT	100	-----	100	1,100	300
INTEGRATED CIRCUITS - - - -	100	-----	-----	-----	100
LASERS - - - - -	100	-----	-----	-----	-----
MICROWAVE AND RADAR - - - -	100	-----	200	100	600
RADIO AND TV RECEIVERS - -	-----	-----	-----	-----	100
RADIO AND TV TRANSMITTERS -	-----	-----	-----	-----	-----
RECORDING - - - - -	-----	-----	-----	-----	-----
SEMICONDUCTOR DEVICES - - -	300	-----	-----	-----	300
SONAR - - - - -	200	-----	-----	-----	200
SONIC, ULTRASONIC DEVICES -	-----	-----	-----	-----	-----
THERMO-ELECTRIC DEVICES - -	-----	-----	-----	-----	-----
X-RAY - - - - -	-----	-----	-----	-----	-----
OTHER - - - - -	-----	-----	-----	100	300
LAB-SCI-PHOTO-OPT EQUIP. THIS FIELD GENERALLY - - -	400 100	----- -----	100 -----	900 200	400 100
LAB., SCIENTIFIC APPARATUS	-----	-----	-----	100	-----
MEASURING, CONTROL INSTRUM.	-----	-----	-----	500	-----
OPTICAL INSTRUMENTS, LENSES	100	-----	-----	-----	-----
PHOTOGRAPHIC EQUIPMENT - -	100	-----	-----	-----	100
TEMPERATURE MEASUREMENT - -	-----	-----	-----	100	-----
TIMING DEVICES - - - - -	-----	-----	-----	-----	-----
OTHER - - - - -	-----	-----	-----	-----	100

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969  
 PERSONNEL MEETING CRITERIA BY PRODUCTS OR SERVICES AND AREAS OF TECHNOLOGY--CONTINUED

	AREAS OF TECHNOLOGY						
PHYSICS, CHEMISTRY, AND AERONAUTICS	NUCLEAR	ENGINEERING PROCESSES AND APPLICATIONS	AUTOMATION AND CONTROL	WORK MANAGEMENT AND EVALUATION	INFORMATION AND MATHEMATICS	OTHER	NO REPORT
300	100	1,300	2,400	4,900	700	400	700
400	-----	400	300	1,200	100	100	300
500	-----	100	-----	-----	-----	-----	-----
600	-----	-----	-----	-----	-----	-----	-----
700	-----	-----	-----	300	-----	-----	-----
800	-----	-----	400	200	-----	-----	-----
900	-----	-----	-----	-----	-----	-----	-----
000	-----	-----	-----	100	100	-----	-----
100	-----	100	-----	200	-----	-----	-----
200	-----	200	200	700	100	-----	100
300	-----	-----	-----	-----	-----	-----	-----
400	-----	100	1,100	300	100	-----	100
500	-----	-----	-----	100	-----	-----	-----
600	-----	-----	-----	-----	-----	-----	-----
700	-----	200	100	600	-----	100	-----
800	-----	-----	-----	100	-----	-----	-----
900	-----	-----	-----	-----	-----	-----	-----
000	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	300	-----	-----	-----
200	-----	-----	-----	200	-----	-----	-----
300	-----	-----	-----	-----	-----	-----	-----
400	-----	-----	-----	-----	-----	-----	-----
500	-----	-----	-----	-----	-----	-----	-----
600	-----	-----	100	300	100	100	-----
700	-----	100	900	400	100	100	100
800	-----	-----	200	100	-----	-----	-----
900	-----	-----	100	-----	-----	-----	-----
000	-----	-----	500	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----
200	-----	-----	-----	100	-----	-----	-----
300	-----	-----	100	-----	-----	-----	-----
400	-----	-----	-----	-----	-----	-----	-----
500	-----	-----	-----	100	-----	-----	-----
600	-----	-----	-----	-----	-----	-----	-----
700	-----	-----	-----	-----	-----	-----	-----
800	-----	-----	-----	-----	-----	-----	-----
900	-----	-----	-----	-----	-----	-----	-----
000	-----	-----	-----	100	-----	-----	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND AREAS

PRODUCTS OR SERVICES	TOTAL	BIOMEDICAL	BEHAVIORAL AND SOCIAL	CHEMICAL AND MATERIALS	METAL AND METALLURGY
PRODUCTS OR SERVICES, CONTINUED					
MACHINERY, MECH. EQUIP.	30,100	100	100	1,100	500
THIS FIELD GENERALLY - - -	5,100	-----	-----	100	-----
AIR COMPRESSORS, BLOWERS -	900	-----	-----	100	-----
AIR CONDITIONING, HEATING	8,300	-----	-----	200	-----
BEARINGS - - - - -	500	-----	-----	-----	100
CONSTRUCTION EQUIPMENT - -	600	-----	-----	-----	-----
DIES, JIGS, PATTERNS - - -	100	-----	-----	-----	-----
DISTILLING EQUIPMENT - - -	100	-----	-----	-----	-----
FARM MACHINERY - - - - -	1,400	-----	-----	-----	-----
FOOD MACHINERY - - - - -	200	-----	-----	-----	-----
FURNACES, HEATING EQUIPMENT	900	-----	-----	100	100
GEARS - - - - -	100	-----	-----	-----	-----
HYDRAULIC MACHINERY - - - -	400	-----	-----	-----	-----
INDUSTRIAL MACHINERY, EQUIP.	1,400	-----	-----	100	-----
INTERNAL COMBUSTION ENGINES	500	-----	-----	-----	-----
MACHINE TOOLS, ACCESSORIES	700	-----	-----	-----	-----
MATERIALS HANDLING MACH. -	800	-----	-----	-----	-----
MINING MACHINERY - - - - -	300	-----	-----	-----	-----
NUCLEAR MACHINERY - - - - -	1,200	-----	-----	-----	-----
PAPER MACHINERY - - - - -	300	-----	-----	-----	-----
PNEUMATIC EQUIPMENT - - - -	300	-----	-----	-----	-----
POWER TRANSMISSION EQUIP.	300	-----	-----	-----	-----
PRINTING, DUPLICATING MACH.	200	-----	-----	-----	-----
PUMPS, LIQUID HANDLING EQUIP	1,200	-----	-----	100	-----
REFRIGERATING EQUIPMENT - -	700	-----	-----	-----	-----
SPECIALIZED INDUSTRIAL MACH	1,000	-----	-----	-----	-----
STEAM ENGINES - - - - -	100	-----	-----	-----	-----
TEXTILE MACHINERY - - - - -	200	-----	-----	-----	-----
TURBINES - - - - -	800	-----	-----	-----	-----
VENDING, SERVICE MACHINERY	-----	-----	-----	-----	-----
OTHER - - - - -	1,500	-----	-----	-----	-----

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PERSONNEL MEETING CRITERIA BY PRODUCTS OR SERVICES AND AREAS OF TECHNOLOGY--CONTINUED

TOTAL	AREAS OF TECHNOLOGY							
	BIOMEDICAL	BEHAVIORAL AND SOCIAL	CHEMICAL AND MATERIALS	METALLUR- GICAL	EARTH, ATMOSPHERIC AND MARINE	ENVIRON- MENTAL AND STRUCTURAL	ELECTRO- MAGNETIC	DYNAMICS AND MECHANICS
100	100	100	1,100	500	200	2,700	700	11,200
100	-----	-----	100	-----	-----	100	100	2,300
900	-----	-----	100	-----	-----	-----	-----	400
800	-----	-----	200	-----	-----	2,100	100	3,100
500	-----	-----	-----	100	-----	-----	-----	300
500	-----	-----	-----	-----	-----	-----	-----	100
100	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	400
200	-----	-----	-----	-----	-----	-----	-----	100
900	-----	-----	100	100	-----	-----	100	200
00	-----	-----	-----	-----	-----	-----	-----	100
00	-----	-----	-----	-----	-----	-----	-----	300
00	-----	-----	100	-----	-----	-----	100	500
00	-----	-----	-----	-----	-----	-----	-----	300
00	-----	-----	-----	-----	-----	-----	100	200
00	-----	-----	-----	-----	-----	-----	-----	200
00	-----	-----	-----	-----	-----	-----	-----	-----
00	-----	-----	-----	-----	-----	-----	-----	300
00	-----	-----	-----	-----	-----	-----	-----	100
00	-----	-----	-----	-----	-----	-----	-----	100
00	-----	-----	-----	-----	-----	-----	-----	200
00	-----	-----	-----	-----	-----	-----	-----	100
00	-----	-----	100	-----	-----	100	-----	500
00	-----	-----	-----	-----	-----	100	-----	200
00	-----	-----	-----	-----	-----	-----	100	300
00	-----	-----	-----	-----	-----	-----	-----	-----
00	-----	-----	-----	-----	-----	-----	-----	100
00	-----	-----	-----	-----	-----	-----	-----	400
00	-----	-----	-----	-----	-----	-----	-----	-----
00	-----	-----	-----	-----	-----	100	-----	500



NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL,  
NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND AREAS OF

PRODUCTS OR SERVICES	AREAS OF TECHNOLOGY					
	HEAT, LIGHT AND APPLIED PHYSICS	NUCLEAR	ENGINEERING PROCESSES AND APPLICATIONS	AUTOMATION AND CONTROL	WORK MANAGE- MENT AND EVALUATION	INFORM AN MATHE
PRODUCTS OR SERVICES, CONTINUED						
MACHINERY, MECH. EQUIP.	1,500	600	2,300	800	5,300	
THIS FIELD GENERALLY - - -	200	-----	400	100	800	---
AIR COMPRESSORS, BLOWERS -	-----	-----	100	-----	100	---
AIR CONDITIONING, HEATING	600	-----	400	200	800	---
BEARINGS - - - - -	-----	-----	-----	-----	100	---
CONSTRUCTION EQUIPMENT - -	-----	-----	100	-----	200	---
DIES, JIGS, PATTERNS - - -	-----	-----	-----	-----	-----	---
DISTILLING EQUIPMENT - - -	-----	-----	-----	-----	-----	---
FARM MACHINERY - - - - -	-----	-----	200	-----	600	---
FOOD MACHINERY - - - - -	-----	-----	-----	-----	100	---
FURNACES, HEATING EQUIPMENT	100	-----	100	-----	100	---
GEARS - - - - -	-----	-----	-----	-----	-----	---
HYDRAULIC MACHINERY - - - -	-----	-----	-----	-----	-----	---
INDUSTRIAL MACHINERY, EQUIP.	-----	-----	100	100	400	---
INTERNAL COMBUSTION ENGINES	-----	-----	-----	-----	100	---
MACHINE TOOLS, ACCESSORIES	-----	-----	100	-----	300	---
MATERIALS HANDLING MACH. -	-----	-----	300	-----	100	---
MINING MACHINERY - - - - -	-----	-----	100	-----	100	---
NUCLEAR MACHINERY - - - - -	100	500	-----	-----	100	---
PAPER MACHINERY - - - - -	-----	-----	-----	-----	100	---
PNEUMATIC EQUIPMENT - - - -	-----	-----	-----	100	100	---
POWER TRANSMISSION EQUIP.	-----	-----	-----	-----	-----	---
PRINTING, DUPLICATING MACH.	-----	-----	-----	-----	100	---
PUMPS, LIQUID HANDLING EQUIP	-----	-----	-----	-----	200	---
REFRIGERATING EQUIPMENT -	100	-----	-----	-----	200	---
SPECIALIZED INDUSTRIAL MACH	100	-----	100	100	200	---
STEAM ENGINES - - - - -	-----	-----	-----	-----	-----	---
TEXTILE MACHINERY - - - - -	-----	-----	-----	-----	-----	---
TURBINES - - - - -	100	-----	-----	-----	100	---
VENDING, SERVICE MACHINERY	-----	-----	-----	-----	-----	---
OTHER - - - - -	100	-----	100	100	300	---

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## PERSONS MEETING CRITERIA BY PRODUCTS OR SERVICES AND AREAS OF TECHNOLOGY--CONTINUED

	AREAS OF TECHNOLOGY						
T, AND IED ICS	NUCLEAR	ENGINEERING PROCESSES AND APPLICATIONS	AUTOMATION AND CONTROL	WORK MANAGE- MENT AND EVALUATION	INFORMATION AND MATHEMATICS	OTHER	NO REPORT
00	600	2,300	800	5,300	400	700	2,200
00	-----	400	100	800	-----	100	800
--	-----	100	-----	100	-----	-----	100
00	-----	400	200	800	-----	200	500
--	-----	-----	-----	100	-----	-----	-----
--	-----	100	-----	200	-----	-----	-----
--	-----	-----	-----	-----	-----	-----	-----
--	-----	-----	-----	-----	-----	-----	-----
--	-----	200	-----	600	-----	-----	100
--	-----	-----	-----	100	-----	-----	-----
00	-----	100	-----	100	-----	-----	-----
--	-----	-----	-----	-----	-----	-----	-----
--	-----	-----	-----	-----	-----	-----	-----
--	-----	100	100	400	-----	100	100
--	-----	-----	-----	100	-----	-----	-----
--	-----	100	-----	300	-----	-----	100
--	-----	300	-----	100	-----	-----	-----
--	-----	100	-----	100	-----	-----	-----
00	500	-----	-----	100	100	-----	-----
--	-----	-----	-----	100	-----	-----	-----
--	-----	-----	100	100	-----	-----	-----
--	-----	-----	-----	-----	-----	-----	-----
--	-----	-----	-----	100	-----	-----	-----
--	-----	-----	-----	200	-----	-----	100
00	-----	-----	-----	200	-----	-----	100
00	-----	100	100	200	-----	-----	-----
--	-----	-----	-----	-----	-----	-----	-----
--	-----	-----	-----	-----	-----	-----	-----
00	-----	-----	-----	100	-----	-----	-----
--	-----	-----	-----	-----	-----	-----	-----
00	-----	100	100	300	-----	-----	100

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1954  
NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND AREAS OF TECHNOLOGY

		AREAS OF TECHNOLOGY				
PRODUCTS OR SERVICES	TOTAL	BIO MEDICAL	BEHAVIORAL AND SOCIAL	CHEMICAL AND MATERIALS	METALLUR- GICAL	EARTH AND ATMOSPHERIC MARINE
PRODUCTS OR SERVICES, CONTINUED						
MARINE TRANSPORTATION -	5,000	-----	-----	-----	100	-----
THIS FIELD GENERALLY - - -	700	-----	-----	-----	-----	-----
BOATS AND SMALL CRAFT - - -	200	-----	-----	-----	-----	-----
INLAND WATERWAY CRAFT, SERV.	-----	-----	-----	-----	-----	-----
MARINE AUXILIARIES - - - -	100	-----	-----	-----	-----	-----
MARINE ENGINES - - - - -	100	-----	-----	-----	-----	-----
MERCHANT SHIPS - - - - -	300	-----	-----	-----	-----	-----
NAVAL ARCHITECTURAL SER. -	700	-----	-----	-----	-----	-----
NAVAL VESSELS - - - - -	1,000	-----	-----	-----	-----	-----
OCEAN TRANSPORTATION - - -	200	-----	-----	-----	-----	-----
PORT FACILITIES, SERVICES -	100	-----	-----	-----	-----	-----
PROPELLERS AND SHAFTING -	-----	-----	-----	-----	-----	-----
SHIPBUILDING, REPAIR SERVICE	800	-----	-----	-----	-----	-----
UNDERWATER CRAFT - - - - -	400	-----	-----	-----	-----	-----
OTHER - - - - -	300	-----	-----	-----	-----	-----
MEDICAL, HEALTH SERVICES	1,300	400	-----	-----	-----	-----
THIS FIELD GENERALLY - - -	400	100	-----	-----	-----	-----
ARTIFICIAL ORGANS - - - -	100	-----	-----	-----	-----	-----
MEDICAL AND HEALTH CARE -	200	100	-----	-----	-----	-----
MEDICAL, DENTAL INSTRUMENTS	200	100	-----	-----	-----	-----
MEDICAL LABORATORY SERVICES	-----	-----	-----	-----	-----	-----
PROSTHETIC DEVICES - - - -	-----	-----	-----	-----	-----	-----
OTHER - - - - -	400	100	-----	-----	-----	-----
METALS, BASIC - - - - -	13,500	-----	100	1,100	7,300	-----
THIS FIELD GENERALLY - - -	2,600	-----	-----	300	1,400	-----
ALUMINUM - - - - -	1,300	-----	-----	100	400	-----
COPPER - - - - -	500	-----	-----	-----	300	-----
ELECTROMETALLURGICAL PROD.	200	-----	-----	-----	100	-----
FOUNDRIES - - - - -	600	-----	-----	-----	300	-----
IRON-STEEL MILLS, FOUNDRIES	3,900	-----	-----	200	1,800	-----
LEAD AND ZINC - - - - -	300	-----	-----	-----	100	-----
METALLURGICAL PRODUCTS - -	800	-----	-----	100	600	-----
METALLURGICAL SERVICES - -	1,100	-----	-----	100	800	-----
NON-FERROUS SMELTING - - -	800	-----	-----	-----	500	-----
NON-FERROUS CASTINGS - - -	200	-----	-----	-----	100	-----
RADIOACTIVE METALS - - - -	100	-----	-----	-----	100	-----
RARE METALS - - - - -	-----	-----	-----	-----	-----	-----
REFRACTORY METALS - - - - -	300	-----	-----	-----	200	-----
OTHER - - - - -	900	-----	-----	100	600	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND AREAS OF TECHNOLOGY--CONTINUED

TOTAL	AREAS OF TECHNOLOGY							
	BIDMEDICAL	BEHAVIORAL AND SOCIAL	CHEMICAL AND MATERIALS	METALLUR- GICAL	EARTH, ATMOSPHERIC AND MARINE	ENVIRON- MENTAL AND STRUCTURAL	ELECTRO- MAGNETIC	DYNAMICS AND MECHANICS
000	-----	-----	-----	100	900	600	300	800
700	-----	-----	-----	-----	200	100	-----	100
200	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----
300	-----	-----	-----	-----	100	-----	-----	100
700	-----	-----	-----	-----	200	100	-----	100
000	-----	-----	-----	-----	100	100	100	200
200	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----
800	-----	-----	-----	-----	100	100	100	100
400	-----	-----	-----	-----	100	-----	-----	100
300	-----	-----	-----	-----	-----	-----	-----	-----
300	400	-----	-----	-----	-----	100	-----	100
400	100	-----	-----	-----	-----	100	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----
200	100	-----	-----	-----	-----	-----	-----	-----
200	100	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----
400	100	-----	-----	-----	-----	100	-----	-----
500	-----	100	1,100	7,300	100	100	200	500
600	-----	-----	300	1,400	-----	-----	-----	100
300	-----	-----	100	400	-----	-----	100	100
500	-----	-----	-----	300	-----	-----	-----	-----
200	-----	-----	-----	100	-----	-----	-----	-----
600	-----	-----	-----	300	-----	-----	-----	-----
500	-----	-----	200	1,800	-----	100	100	200
300	-----	-----	-----	100	-----	-----	-----	-----
800	-----	-----	100	600	-----	-----	-----	-----
100	-----	-----	100	800	-----	-----	-----	-----
800	-----	-----	-----	500	-----	-----	-----	-----
200	-----	-----	-----	100	-----	-----	-----	-----
100	-----	-----	-----	100	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----
300	-----	-----	-----	200	-----	-----	-----	-----
900	-----	-----	100	600	-----	-----	-----	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND AREAS OF TECHNOLOGY

PRODUCTS OR SERVICES	AREAS OF TECHNOLOGY					
	HEAT, LIGHT AND APPLIED PHYSICS	NUCLEAR	ENGINEERING PROCESSES AND APPLICATIONS	AUTOMATION AND CONTROL	WORK MANAGE- MENT AND EVALUATION	INFORMATION MATERIALS
PRODUCTS OR SERVICES, CONTINUED						
MARINE TRANSPORTATION -	100	100	500	100	900	
THIS FIELD GENERALLY - - -	-----	-----	100	-----	100	
BOATS AND SMALL CRAFT - - -	-----	-----	-----	-----	-----	
INLAND WATERWAY CRAFT, SERV.	-----	-----	-----	-----	-----	
MARINE AUXILIARIES - - - -	-----	-----	-----	-----	-----	
MARINE ENGINES - - - - -	-----	-----	-----	-----	-----	
MERCHANT SHIPS - - - - -	-----	-----	-----	-----	100	
NAVAL ARCHITECTURAL SER. -	-----	-----	100	-----	100	
NAVAL VESSELS - - - - -	-----	-----	100	-----	200	
OCEAN TRANSPORTATION - - -	-----	-----	-----	-----	-----	
PORT FACILITIES, SERVICES	-----	-----	-----	-----	-----	
PROPELLERS AND SHAFTING -	-----	-----	-----	-----	-----	
SHIPBUILDING, REPAIR SERVICE	-----	-----	100	-----	200	
UNDERWATER CRAFT - - - -	-----	-----	-----	-----	100	
OTHER - - - - -	-----	-----	-----	-----	100	
MEDICAL, HEALTH SERVICES	-----	-----	-----	100	300	
THIS FIELD GENERALLY - - -	-----	-----	-----	-----	100	
ARTIFICIAL ORGANS - - - -	-----	-----	-----	-----	-----	
MEDICAL AND HEALTH CARE - -	-----	-----	-----	-----	100	
MEDICAL, DENTAL INSTRUMENTS	-----	-----	-----	-----	-----	
MEDICAL LABORATORY SERVICES	-----	-----	-----	-----	-----	
PROSTHETIC DEVICES - - - -	-----	-----	-----	-----	-----	
OTHER - - - - -	-----	-----	-----	-----	100	
METALS, BASIC - - - - -	100	-----	600	200	2,000	
THIS FIELD GENERALLY - - -	100	-----	100	-----	100	
ALUMINUM - - - - -	-----	-----	100	-----	400	
COPPER - - - - -	-----	-----	-----	-----	-----	
ELECTROMETALLURGICAL PROD.	-----	-----	-----	-----	-----	
FOUNDRIES - - - - -	-----	-----	-----	-----	100	
IRON-STEEL MILLS, FOUNDRIES	-----	-----	200	100	1,000	
LEAD AND ZINC - - - - -	-----	-----	-----	-----	-----	
METALLURGICAL PRODUCTS - -	-----	-----	-----	-----	100	
METALLURGICAL SERVICES - -	-----	-----	-----	-----	-----	
NON-FERROUS SMELTING - - -	-----	-----	-----	-----	100	
NON-FERROUS CASTINGS - - -	-----	-----	-----	-----	-----	
RADIOACTIVE METALS - - - -	-----	-----	-----	-----	-----	
RARE METALS - - - - -	-----	-----	-----	-----	-----	
REFRACTORY METALS - - - -	-----	-----	-----	-----	-----	
OTHER - - - - -	-----	-----	-----	-----	100	

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND AREAS OF TECHNOLOGY--CONTINUED

AREAS OF TECHNOLOGY							
HEAT, LIGHT AND APPLIED PHYSICS	NUCLEAR	ENGINEERING PROCESSES AND APPLICATIONS	AUTOMATION AND CONTROL	WORK MANAGE- MENT AND EVALUATION	INFORMATION AND MATHEMATICS	OTHER	NO REPORT
100	100	500	100	900	100	200	300
-----	-----	100	-----	100	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	100	-----	-----	-----
-----	-----	100	-----	100	-----	-----	100
-----	-----	100	-----	200	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	100	-----	200	-----	100	-----
-----	-----	-----	-----	100	-----	-----	-----
-----	-----	-----	-----	100	-----	-----	-----
-----	-----	-----	100	300	-----	-----	100
-----	-----	-----	-----	100	-----	-----	-----
-----	-----	-----	-----	100	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	100	-----	-----	-----
100	-----	600	200	2,000	100	100	1,000
100	-----	100	-----	100	-----	-----	400
-----	-----	100	-----	400	-----	-----	100
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	100	-----	-----	-----
-----	-----	200	100	1,000	-----	100	200
-----	-----	-----	-----	100	-----	-----	-----
-----	-----	-----	-----	100	-----	-----	100
-----	-----	-----	-----	100	-----	-----	100
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	100	-----	-----	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND AREAS

PRODUCTS OR SERVICES	TOTAL	BIOMEDICAL	BEHAVIORAL AND SOCIAL	CHEMICAL AND MATERIALS	METAL FABRICATION
PRODUCTS OR SERVICES, CONTINUED					
METAL FABRICATED PROD.	6,500	-----	-----	500	9
THIS FIELD GENERALLY - - -	1,400	-----	-----	100	2
BOILERS - - - - -	500	-----	-----	-----	-----
CANS AND CONTAINERS - - -	100	-----	-----	-----	-----
ELECTROPLATED, COATED PROD.	200	-----	-----	100	-----
HARDWARE - - - - -	100	-----	-----	-----	-----
MACHINED OR TURNED PRODUCTS	300	-----	-----	-----	-----
METAL FABRICATION SERVICES	400	-----	-----	-----	-----
PIPE, FITTINGS, VALVES - -	700	-----	-----	-----	1
PRESSURE VESSELS - - - - -	600	-----	-----	-----	-----
SHEET METAL PRODUCTS - - -	300	-----	-----	-----	-----
STAMPINGS - - - - -	200	-----	-----	-----	-----
STRUCTURAL STEEL PRODUCTS	400	-----	-----	-----	-----
WELDMENTS - - - - -	200	-----	-----	-----	1
WIRE PRODUCTS - - - - -	300	-----	-----	-----	1
OTHER - - - - -	700	-----	-----	-----	1
MINING - - - - -	6,600	-----	100	100	8
THIS FIELD GENERALLY - - -	2,000	-----	-----	-----	2
COAL - - - - -	800	-----	-----	-----	-----
IRON ORES - - - - -	600	-----	-----	-----	2
MINING SERVICES - - - - -	300	-----	-----	-----	-----
NON-FERROUS METAL ORES - -	1,400	-----	-----	-----	2
NON-METALLIC MINERALS - - -	500	-----	-----	-----	1
QUARRY PRODUCTS - - - - -	200	-----	-----	-----	-----
SULFUR - - - - -	100	-----	-----	-----	-----
URANIUM, RADIOACTIVE ORES	300	-----	-----	-----	-----
OTHER - - - - -	300	-----	-----	-----	-----
MOTOR VEHICLE TRANS. - -	2,600	-----	-----	100	2
THIS FIELD GENERALLY - - -	500	-----	-----	-----	-----
AUTOMOBILES - - - - -	800	-----	-----	100	1
BUSES, TRUCKS, TRAILERS - -	300	-----	-----	-----	-----
ENGINES - - - - -	200	-----	-----	-----	-----
MOTORCYCLES, ETC. - - - -	-----	-----	-----	-----	-----
MOTOR TRANSPORTATION SERV.	-----	-----	-----	-----	-----
PARTS AND ACCESSORIES - - -	600	-----	-----	-----	-----
OTHER - - - - -	200	-----	-----	-----	-----

# NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND AREAS OF TECHNOLOGY--CONTINUED

TOTAL	AREAS OF TECHNOLOGY							DYNAMICS AND MECHANICS
	BIOMEDICAL	BEHAVIORAL AND SOCIAL	CHEMICAL AND MATERIALS	METALLUR- GICAL	EARTH, ATMOSPHERIC AND MARINE	ENVIRON- MENTAL AND STRUCTURAL	ELECTRO- MAGNETIC	
6,500	-----	-----	500	900	-----	400	100	900
1,400	-----	-----	100	200	-----	100	-----	200
500	-----	-----	-----	-----	-----	-----	-----	100
100	-----	-----	-----	-----	-----	-----	-----	-----
200	-----	-----	100	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----
300	-----	-----	-----	-----	-----	-----	-----	100
400	-----	-----	-----	-----	-----	-----	-----	-----
700	-----	-----	-----	100	-----	-----	-----	200
600	-----	-----	-----	-----	-----	-----	-----	100
300	-----	-----	-----	-----	-----	-----	-----	-----
200	-----	-----	-----	-----	-----	-----	-----	-----
400	-----	-----	-----	-----	-----	300	-----	-----
200	-----	-----	-----	100	-----	-----	-----	-----
300	-----	-----	-----	100	-----	-----	-----	-----
700	-----	-----	-----	100	-----	-----	-----	100
6,600	-----	100	100	800	3,600	200	100	100
2,000	-----	-----	-----	200	1,000	100	-----	-----
800	-----	-----	-----	-----	500	-----	-----	-----
600	-----	-----	-----	200	200	-----	-----	-----
300	-----	-----	-----	-----	200	-----	-----	-----
1,400	-----	-----	-----	200	900	-----	-----	-----
500	-----	-----	-----	100	300	-----	-----	-----
200	-----	-----	-----	-----	100	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----
300	-----	-----	-----	-----	200	-----	-----	-----
300	-----	-----	-----	-----	200	-----	-----	-----
2,600	-----	-----	100	200	-----	300	100	500
500	-----	-----	-----	-----	-----	200	-----	100
800	-----	-----	100	100	-----	-----	-----	100
300	-----	-----	-----	-----	-----	-----	-----	100
200	-----	-----	-----	-----	-----	-----	-----	100
-----	-----	-----	-----	-----	-----	-----	-----	-----
600	-----	-----	-----	-----	-----	-----	-----	100
200	-----	-----	-----	-----	-----	100	-----	-----



NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL  
NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND

PRODUCTS OR SERVICES	AREAS OF TECHNOLOGY				
	HEAT, LIGHT AND APPLIED PHYSICS	NUCLEAR	ENGINEERING PROCESSES AND APPLICATIONS	AUTOMATION AND CONTROL	WORK MANAGEMENT EVALUATION
PRODUCTS OR SERVICES, CONTINUED					
METAL FABRICATED PROD.	300	-----	700	100	200
THIS FIELD GENERALLY - - -	-----	-----	100	-----	-----
BOILERS - - - - -	100	-----	-----	-----	-----
CANS AND CONTAINERS - - -	-----	-----	-----	-----	-----
ELECTROPLATED, COATED PROD.	-----	-----	-----	-----	-----
HARDWARE - - - - -	-----	-----	-----	-----	-----
MACHINED OR TURNED PRODUCTS	-----	-----	-----	-----	-----
METAL FABRICATION SERVICES	-----	-----	100	-----	-----
PIPE, FITTINGS, VALVES - -	-----	-----	100	-----	-----
PRESSURE VESSELS - - - -	100	-----	100	-----	-----
SHEET METAL PRODUCTS - - -	-----	-----	-----	-----	-----
STAMPINGS - - - - -	-----	-----	-----	-----	-----
STRUCTURAL STEEL PRODUCTS	-----	-----	-----	-----	-----
WELDMENTS - - - - -	-----	-----	-----	-----	-----
WIRE PRODUCTS - - - - -	-----	-----	-----	-----	-----
OTHER - - - - -	100	-----	100	-----	-----
MINING - - - - -					
THIS FIELD GENERALLY - - -	-----	-----	300	-----	-----
COAL - - - - -	-----	-----	100	-----	-----
IRON ORES - - - - -	-----	-----	100	-----	-----
MINING SERVICES - - - - -	-----	-----	-----	-----	-----
NON-FERROUS METAL ORES - -	-----	-----	-----	-----	-----
NON-METALLIC MINERALS - - -	-----	-----	-----	-----	-----
QUARRY PRODUCTS - - - - -	-----	-----	-----	-----	-----
SULFUR - - - - -	-----	-----	-----	-----	-----
URANIUM, RADIOACTIVE ORES	-----	-----	-----	-----	-----
OTHER - - - - -	-----	-----	-----	-----	-----
MOTOR VEHICLE TRANS. - - -					
THIS FIELD GENERALLY - - -	-----	-----	200	100	-----
AUTOMOBILES - - - - -	-----	-----	100	-----	-----
BUSES, TRUCKS, TRAILERS - -	-----	-----	-----	-----	-----
ENGINES - - - - -	-----	-----	-----	-----	-----
MOTORCYCLES, ETC. - - - -	-----	-----	-----	-----	-----
MOTOR TRANSPORTATION SERV.	-----	-----	-----	-----	-----
PARTS AND ACCESSORIES - - -	-----	-----	-----	-----	-----
OTHER - - - - -	-----	-----	-----	-----	-----

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND AREAS OF TECHNOLOGY--CONTINUED

	AREAS OF TECHNOLOGY						
HEAT, LIGHT AND APPLIED PHYSICS	NUCLEAR	ENGINEERING PROCESSES AND APPLICATIONS	AUTOMATION AND CONTROL	WORK MANAGE- MENT AND EVALUATION	INFORMATION AND MATHEMATICS	OTHER	NO REPORT
300	-----	700	100	2,000	100	100	300
-----	-----	100	-----	400	-----	-----	100
100	-----	-----	-----	100	-----	-----	-----
-----	-----	-----	-----	100	-----	-----	-----
-----	-----	-----	-----	100	-----	-----	-----
-----	-----	-----	-----	200	-----	-----	-----
-----	-----	100	-----	200	-----	-----	-----
-----	-----	100	-----	200	-----	-----	-----
100	-----	100	-----	100	100	-----	-----
-----	-----	-----	-----	200	-----	-----	-----
-----	-----	-----	-----	100	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	100	-----	-----	-----
100	-----	100	-----	200	-----	-----	-----
-----	-----	300	-----	500	-----	100	700
-----	-----	100	-----	100	-----	-----	400
-----	-----	100	-----	100	-----	-----	100
-----	-----	-----	-----	100	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	100
-----	-----	-----	-----	100	-----	-----	100
-----	-----	-----	-----	100	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	200	100	900	100	-----	100
-----	-----	-----	-----	100	-----	-----	-----
-----	-----	100	-----	200	-----	-----	100
-----	-----	-----	-----	100	-----	-----	-----
-----	-----	-----	-----	100	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	300	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES

PRODUCTS OR SERVICES	TOTAL	BIDMEDICAL	BEHAVIORAL AND SOCIAL	CHEMICAL AND MATERIALS
PRODUCTS OR SERVICES, CONTINUED				
ORDNANCE - - - - -	5,200	-----	-----	100
THIS FIELD GENERALLY - - -	1,200	-----	-----	100
AMMUNITION - - - - -	300	-----	-----	-----
FIRE CONTROL EQUIPMENT - -	500	-----	-----	-----
GUIDED MISSILES - - - - -	2,100	-----	-----	-----
GUNS - - - - -	100	-----	-----	-----
ORDNANCE SERVICES - - - - -	100	-----	-----	-----
SMALL ARMS - - - - -	100	-----	-----	-----
TANKS - - - - -	100	-----	-----	-----
OTHER - - - - -	800	-----	-----	-----
PETROLEUM - - - - -	16,100	-----	700	500
THIS FIELD GENERALLY - - -	6,000	-----	300	200
ASPHALT MATERIALS - - - - -	100	-----	-----	-----
CRUDE PETROLEUM - - - - -	1,700	-----	100	-----
GAS PIPELINES - - - - -	400	-----	-----	-----
LIQUIFIED GAS - - - - -	100	-----	-----	-----
LUBRICATING OIL AND GREASE -	200	-----	-----	-----
NATURAL GAS - - - - -	600	-----	-----	-----
OILFIELD SERVICES - - - - -	1,400	-----	-----	100
OIL PIPELINES - - - - -	300	-----	-----	-----
REFINERY PRODUCTS - - - - -	1,500	-----	100	100
RESERVOIRS (OIL AND GAS) -	2,400	-----	100	-----
OTHER - - - - -	1,200	-----	100	-----
RAILWAY, RAPID TRANSIT -	1,700	-----	-----	-----
THIS FIELD GENERALLY - - -	500	-----	-----	-----
RAILROAD EQUIPMENT - - -	600	-----	-----	-----
RAILROAD TRANSPORTATION -	200	-----	-----	-----
RAILWAY SERVICES - - - - -	-----	-----	-----	-----
RAPID TRANSIT - - - - -	200	-----	-----	-----
OTHER - - - - -	100	-----	-----	-----
UTILITIES - - - - -	15,200	-----	200	300
THIS FIELD GENERALLY - - -	1,100	-----	100	-----
ELECTRIC UTILITIES - - - -	8,900	-----	100	100
ELECTRIC AND GAS UTILITIES -	2,800	-----	100	100
GAS UTILITIES - - - - -	800	-----	-----	100
SANITARY SERVICES - - - - -	100	-----	-----	-----
SEWERAGE, WASTE DISPOSAL SER	500	-----	-----	-----
WATER SUPPLY AND TREATMENT	800	-----	-----	-----
OTHER - - - - -	300	-----	-----	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND AREAS OF TECHNOLOGY--CONTINUED

TOTAL	AREAS OF TECHNOLOGY							
	BIOMEDICAL	BEHAVIORAL AND SOCIAL	CHEMICAL AND MATERIALS	METALLUR- GICAL	EARTH, ATMOSPHERIC AND MARINE	ENVIRON- MENTAL AND STRUCTURAL	ELECTRO- MAGNETIC	DYNAMICS AND MECHANICS
5,200	-----	-----	100	100	100	100	500	1,100
1,200	-----	-----	100	-----	-----	-----	100	300
300	-----	-----	-----	-----	-----	-----	-----	100
500	-----	-----	-----	-----	-----	-----	100	-----
2,100	-----	-----	-----	-----	-----	-----	200	400
100	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----
800	-----	-----	-----	-----	-----	-----	100	200
6,100	-----	700	500	100	1,800	400	300	1,300
6,000	-----	300	200	-----	600	100	100	200
100	-----	-----	-----	-----	-----	-----	-----	-----
1,700	-----	100	-----	-----	200	-----	-----	100
400	-----	-----	-----	-----	-----	-----	-----	100
100	-----	-----	-----	-----	-----	-----	-----	-----
200	-----	-----	-----	-----	-----	-----	-----	100
600	-----	-----	-----	-----	100	-----	-----	100
1,400	-----	-----	100	-----	200	-----	100	200
300	-----	-----	-----	-----	-----	-----	-----	100
1,500	-----	100	100	-----	-----	100	-----	100
2,400	-----	100	-----	-----	500	-----	-----	200
1,200	-----	100	-----	-----	200	-----	-----	100
1,700	-----	-----	-----	-----	-----	400	100	200
500	-----	-----	-----	-----	-----	200	-----	-----
600	-----	-----	-----	-----	-----	100	-----	200
200	-----	-----	-----	-----	-----	100	-----	-----
200	-----	-----	-----	-----	-----	100	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----
5,200	-----	200	300	-----	100	1,500	7,100	1,800
1,100	-----	100	-----	-----	-----	100	200	200
8,900	-----	100	100	-----	-----	300	5,300	1,000
2,800	-----	100	100	-----	-----	100	1,400	300
800	-----	-----	100	-----	-----	-----	100	200
100	-----	-----	-----	-----	-----	100	-----	-----
500	-----	-----	-----	-----	-----	400	-----	-----
8	-----	-----	-----	-----	100	500	-----	-----
3	-----	-----	-----	-----	-----	-----	-----	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND AREA

PRODUCTS OR SERVICES	AREAS OF TECHNOLOGY				
	HEAT, LIGHT AND APPLIED PHYSICS	NUCLEAR	ENGINEERING PROCESSES AND APPLICATIONS	AUTOMATION AND CONTROL	WORK MANAGE- MENT AND EVALUATION
PRODUCTS OR SERVICES, CONTINUED					
ORDNANCE - - - - -	100	-----	500	300	2,000
THIS FIELD GENERALLY - - - -	-----	-----	100	-----	500
AMMUNITION - - - - -	-----	-----	-----	-----	100
FIRE CONTROL EQUIPMENT - - -	-----	-----	-----	100	200
GUIDED MISSILES - - - - -	100	-----	100	200	900
GUNS - - - - -	-----	-----	-----	-----	-----
ORDNANCE SERVICES - - - - -	-----	-----	-----	-----	100
SMALL ARMS - - - - -	-----	-----	-----	-----	-----
TANKS - - - - -	-----	-----	-----	-----	-----
OTHER - - - - -	-----	-----	100	-----	200
PETROLEUM - - - - -	200	-----	5,000	400	3,200
THIS FIELD GENERALLY - - - -	100	-----	2,000	100	1,200
ASPHALT MATERIALS - - - - -	-----	-----	-----	-----	-----
CRUDE PETROLEUM - - - - -	-----	-----	500	-----	600
GAS PIPELINES - - - - -	-----	-----	100	-----	100
LIQUIFIED GAS - - - - -	-----	-----	-----	-----	-----
LUBRICATING OIL AND GREASE - -	-----	-----	-----	-----	-----
NATURAL GAS - - - - -	-----	-----	100	-----	200
OILFIELD SERVICES - - - - -	-----	-----	400	-----	200
OIL PIPELINES - - - - -	-----	-----	-----	-----	100
REFINERY PRODUCTS - - - - -	-----	-----	800	100	200
RESERVOIRS (OIL AND GAS) - - -	-----	-----	700	-----	400
OTHER - - - - -	-----	-----	300	-----	200
RAILWAY, RAPID TRANSIT - - - -	-----	-----	100	100	400
THIS FIELD GENERALLY - - - -	-----	-----	-----	-----	100
RAILROAD EQUIPMENT - - - - -	-----	-----	-----	-----	100
RAILROAD TRANSPORTATION - - -	-----	-----	-----	-----	100
RAILWAY SERVICES - - - - -	-----	-----	-----	-----	-----
RAPID TRANSIT - - - - -	-----	-----	-----	-----	-----
OTHER - - - - -	-----	-----	-----	-----	-----
UTILITIES - - - - -	100	300	700	400	1,400
THIS FIELD GENERALLY - - - -	-----	-----	100	-----	200
ELECTRIC UTILITIES - - - - -	-----	200	300	200	600
ELECTRIC AND GAS UTILITIES - -	-----	-----	200	100	400
GAS UTILITIES - - - - -	-----	-----	100	-----	100
SANITARY SERVICES - - - - -	-----	-----	-----	-----	-----
SEWERAGE, WASTE DISPOSAL SER -	-----	-----	-----	-----	-----
WATER SUPPLY AND TREATMENT - -	-----	-----	-----	-----	-----
OTHER - - - - -	-----	-----	-----	-----	-----

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND AREAS OF TECHNOLOGY--CONTINUED

	AREAS OF TECHNOLOGY						
HEAT, LIGHT AND APPLIED PHYSICS	NUCLEAR	ENGINEERING PROCESSES AND APPLICATIONS	AUTOMATION AND CONTROL	WORK MANAGE- MENT AND EVALUATION	INFORMATION AND MATHEMATICS	OTHER	NO REPORT
100	-----	500	300	2,000	100	200	100
-----	-----	100	-----	500	-----	-----	-----
-----	-----	-----	-----	100	-----	-----	-----
-----	-----	-----	100	200	-----	-----	-----
100	-----	100	200	900	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	100	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	100	-----	200	-----	-----	-----
200	-----	5,000	400	3,200	400	1,000	900
100	-----	2,000	100	1,200	100	400	500
-----	-----	500	-----	600	-----	-----	-----
-----	-----	100	-----	100	-----	100	100
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	100	-----	200	-----	-----	-----
-----	-----	400	-----	200	-----	-----	-----
-----	-----	-----	-----	100	-----	100	-----
-----	-----	800	100	200	100	-----	-----
-----	-----	700	-----	400	100	300	100
-----	-----	300	-----	200	-----	100	100
-----	-----	100	100	400	100	-----	200
-----	-----	-----	-----	100	-----	-----	100
-----	-----	-----	-----	100	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----
100	300	700	400	1,400	200	400	700
-----	-----	100	-----	200	-----	-----	100
-----	200	300	200	600	100	200	500
-----	-----	200	100	400	100	100	100
-----	-----	100	-----	100	-----	100	-----
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----

NATIONAL REGISTER OF SCIENTIFIC AND  
NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR S

PRODUCTS OR SERVICES	TOTAL	BIOMEDICAL	BEHAVIORAL AND SOCIAL	CHEMICAL AND MATERIAL
PRODUCTS OR SERVICES, CONTINUED				
OTHER PRODUCTS, SERVICES	11,800	100	300	500
ADVERTISING AND PROMOTION -	200	-----	-----	-----
BANKING AND FINANCE - - - -	300	-----	100	-----
BUILDING MAINTENANCE - - - -	200	-----	-----	-----
BUSINESS FORMS - - - - -	-----	-----	-----	-----
CLOTHING - - - - -	100	-----	-----	-----
INSURANCE - - - - -	600	-----	-----	-----
LABORATORY SERVICES - - - -	500	-----	-----	-----
LEATHER - - - - -	-----	-----	-----	-----
LUMBER - - - - -	-----	-----	-----	-----
PAPER - - - - -	600	-----	-----	-----
PAPER PRODUCTS - - - - -	400	-----	-----	-----
PATENTS AND LEGAL SERVICES	400	-----	-----	-----
PERSONNEL SERVICES - - - -	300	-----	-----	-----
PRINTING, RELATED SERVICES	300	-----	-----	-----
PULP - - - - -	200	-----	-----	-----
REGULATORY SERVICES - - - -	400	-----	-----	-----
RETAIL TRADE SERVICES - - -	100	-----	-----	-----
RUBBER, FABRICATED PRODUCTS	400	-----	-----	-----
TEXTILES, TEXTILE PRODUCTS	600	-----	-----	100
TIRES - - - - -	100	-----	-----	-----
TOYS AND AMUSEMENTS - - - -	-----	-----	-----	-----
WHOLESALE TRADE SERVICES -	100	-----	-----	-----
WOOD PRODUCTS - - - - -	300	-----	-----	-----
OTHER PRODUCT - - - - -	1,600	-----	-----	100
OTHER SERVICE - - - - -	3,800	-----	100	100
NO REPORT - - - - -	1,200	-----	-----	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND AREAS OF TECHNOLOGY--CONTINUED

TOTAL	AREAS OF TECHNOLOGY							
	BIOMEDICAL	BEHAVIORAL AND SOCIAL	CHEMICAL AND MATERIALS	METALLUR- GICAL	EARTH, ATMOSPHERIC AND MARINE	ENVIRON- MENTAL AND STRUCTURAL	ELECTRO- MAGNETIC	DYNAMICS AND MECHANICS
11,800	100	300	500	200	200	700	600	1,000
200	-----	-----	-----	-----	-----	-----	-----	-----
300	-----	100	-----	-----	-----	-----	-----	-----
200	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----
600	-----	-----	-----	-----	-----	-----	-----	-----
500	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----
600	-----	-----	-----	-----	-----	-----	100	-----
400	-----	-----	-----	-----	-----	-----	-----	-----
400	-----	-----	-----	-----	-----	-----	100	-----
300	-----	-----	-----	-----	-----	-----	-----	-----
300	-----	-----	-----	-----	-----	-----	-----	-----
200	-----	-----	-----	-----	-----	-----	-----	-----
400	-----	-----	-----	-----	-----	100	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----
400	-----	-----	-----	-----	-----	-----	-----	100
600	-----	-----	100	-----	-----	-----	-----	100
100	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----
300	-----	-----	-----	-----	-----	-----	-----	-----
1,600	-----	-----	100	-----	-----	100	100	200
3,800	-----	100	100	-----	200	300	200	300
1,200	-----	-----	-----	100	100	100	100	100



**NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL**  
**NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND AREAS**

PRODUCTS OR SERVICES	AREAS OF TECHNOLOGY				
	HEAT, LIGHT AND APPLIED PHYSICS	NUCLEAR	ENGINEERING PROCESSES AND APPLICATIONS	AUTOMATION AND CONTROL	WORK MANAGE- MENT AND EVALUATION
<b>PRODUCTS OR SERVICES, CONTINUED</b>					
OTHER PRODUCTS, SERVICES	300	200	900	400	4,500
ADVERTISING AND PROMOTION - - - -	-----	-----	-----	-----	-----
BANKING AND FINANCE - - - -	-----	-----	-----	-----	100
BUILDING MAINTENANCE - - - -	-----	-----	-----	-----	100
BUSINESS FORMS - - - - -	-----	-----	-----	-----	-----
CLOTHING - - - - -	-----	-----	-----	-----	100
INSURANCE - - - - -	-----	-----	-----	-----	400
LABORATORY SERVICES - - - -	-----	-----	-----	-----	200
LEATHER - - - - -	-----	-----	-----	-----	-----
LUMBER - - - - -	-----	-----	-----	-----	-----
PAPER - - - - -	-----	-----	100	100	300
PAPER PRODUCTS - - - - -	-----	-----	-----	-----	200
PATENTS AND LEGAL SERVICES - - - -	-----	-----	-----	-----	-----
PERSONNEL SERVICES - - - - -	-----	-----	-----	-----	100
PRINTING, RELATED SERVICES - - - -	-----	-----	-----	-----	200
PULP - - - - -	-----	-----	100	-----	100
REGULATORY SERVICES - - - - -	-----	-----	-----	-----	100
RETAIL TRADE SERVICES - - - -	-----	-----	-----	-----	100
RUBBER, FABRICATED PRODUCTS - - - -	-----	-----	-----	-----	200
TEXTILES, TEXTILE PRODUCTS - - - -	-----	-----	100	-----	300
TIRES - - - - -	-----	-----	-----	-----	100
TOYS AND AMUSEMENTS - - - - -	-----	-----	-----	-----	-----
WHOLESALE TRADE SERVICES - - - -	-----	-----	-----	-----	-----
WOOD PRODUCTS - - - - -	-----	-----	-----	-----	100
OTHER PRODUCT - - - - -	100	100	100	-----	500
OTHER SERVICE - - - - -	100	100	200	100	1,100
NO REPORT - - - - -	100	-----	100	-----	200

NOTE - GROUPS MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND AREAS OF TECHNOLOGY--CONTINUED

AREAS OF TECHNOLOGY							
HEAT, LIGHT AND APPLIED PHYSICS	NUCLEAR	ENGINEERING PROCESSES AND APPLICATIONS	AUTOMATION AND CONTROL	WORK MANAGE- MENT AND EVALUATION	INFORMATION AND MATHEMATICS	OTHER	NO REPORT
INUED							
S 300	200	900	400	4,500	200	1,100	700
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	100	-----	100	-----
-----	-----	-----	-----	100	-----	-----	-----
-----	-----	-----	-----	100	-----	-----	-----
-----	-----	-----	-----	400	-----	-----	100
-----	-----	-----	-----	200	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	100	100	300	-----	-----	-----
-----	-----	-----	-----	200	-----	-----	-----
-----	-----	-----	-----	100	-----	100	-----
-----	-----	-----	-----	200	-----	100	-----
-----	-----	100	-----	100	-----	-----	-----
-----	-----	-----	-----	100	-----	-----	-----
S -----	-----	-----	-----	200	-----	-----	-----
-----	-----	100	-----	300	-----	-----	100
-----	-----	-----	-----	100	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	100	-----	-----	-----
100	100	100	-----	500	-----	100	100
100	100	200	100	1,100	100	500	300
100	-----	100	-----	200	-----	-----	400

TO TOTAL BECAUSE OF ROUNDING.

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND HIGHEST DEGREE CUP

PRODUCTS OR SERVICES	TOTAL	AERO- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL	GENERA
ALL PRODUCTS OR SERVICES - - -	308,000	13,100	26,600	48,600	65,500	26,300
AGRICULTURE AND FOOD - - - - -	4,200	100	600	400	200	400
THIS FIELD GENERALLY - - - - -	800	-----	100	-----	-----	100
AGRICULTURAL SERVICES - - - - -	600	-----	-----	100	-----	-----
ANIMALS - - - - -	100	-----	-----	-----	-----	-----
DISTILLED PRODUCTS - - - - -	100	-----	-----	-----	-----	-----
FISH PRODUCTS - - - - -	-----	-----	-----	-----	-----	-----
FORESTRY - - - - -	100	-----	-----	100	-----	-----
FOOD AND BEVERAGE PRODUCTS - - -	1,400	-----	300	100	100	300
NATURAL FIBERS - - - - -	100	-----	-----	-----	-----	-----
PLANTS - - - - -	100	-----	-----	-----	-----	-----
TOBACCO - - - - -	100	-----	-----	-----	-----	-----
OTHER - - - - -	700	-----	100	100	-----	-----
AIRCRAFT AND SPACE - - - - -	33,800	8,800	1,100	1,200	5,200	3,800
THIS FIELD GENERALLY - - - - -	6,100	1,600	200	200	900	800
AERONAUTICS - - - - -	2,400	1,300	-----	-----	200	200
AIRCRAFT - - - - -	4,900	1,800	100	300	500	400
AIRCRAFT V/STOL - - - - -	800	400	-----	-----	100	100
AIRCRAFT ENGINES - - - - -	2,800	500	100	-----	100	300
AIRCRAFT PARTS, ACCESSORIES - - -	1,900	200	-----	100	500	200
AIRCRAFT SERVICES - - - - -	200	-----	-----	-----	-----	-----
AIRLINES - - - - -	400	100	-----	100	100	100
ASTRONAUTICS - - - - -	2,000	600	100	-----	400	300
LAUNCH VEHICLES - - - - -	2,100	500	100	100	400	200
RE-ENTRY DEVICES - - - - -	1,500	400	-----	-----	200	200
SPACECRAFT - - - - -	3,800	700	100	100	800	500
SPACECRAFT ENGINES - - - - -	1,300	200	200	-----	100	100
SPACECRAFT PARTS, ACCESS. - - - -	700	100	-----	-----	200	100
SPACECRAFT SERVICES - - - - -	300	-----	-----	-----	100	-----
OTHER - - - - -	2,500	400	100	-----	600	300
CERAMICS - - - - -	2,200	-----	200	300	200	300
THIS FIELD GENERALLY - - - - -	200	-----	-----	-----	-----	-----
ABRASIVES - - - - -	100	-----	-----	-----	-----	-----
CEMENT, CONCRETE, GYPSUM PROD - -	500	-----	100	200	-----	-----
CLAY PRODUCTS - - - - -	100	-----	-----	-----	-----	-----
GLASS PRODUCTS - - - - -	600	-----	-----	-----	100	100
INSULATION MATERIALS - - - - -	100	-----	-----	-----	-----	-----
REFRACTORIES - - - - -	300	-----	-----	-----	-----	-----
RELATED SERVICES - - - - -	-----	-----	-----	-----	-----	-----
OTHER - - - - -	200	-----	-----	-----	-----	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND HIGHEST DEGREE CURRICULA GROUPS

HIGHEST DEGREE CURRICULA GROUPS

TOTAL	AERO- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL	GENERAL	MECHAN- ICAL	METAL- LURGICAL	MINERAL	OTHER	NO REPORT OF CUR- RICULUM
308,000	13,100	26,600	48,600	65,500	26,300	58,500	12,800	15,400	34,300	6,800
4,200	100	600	400	200	400	600	-----	100	1,800	100
800	-----	100	-----	-----	100	100	-----	-----	500	-----
600	-----	-----	100	-----	-----	-----	-----	-----	500	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	100	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	100	-----	-----	-----	-----	-----	-----	-----
1,400	-----	300	100	100	300	300	-----	-----	200	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	100	-----
100	-----	-----	-----	-----	-----	100	-----	-----	-----	-----
700	-----	100	100	-----	-----	100	-----	-----	300	-----
33,800	8,800	1,100	1,200	5,200	3,800	8,500	900	200	3,700	400
6,100	1,600	200	200	900	800	1,200	100	-----	800	100
2,400	1,300	-----	-----	200	200	400	-----	-----	200	-----
4,900	1,800	100	300	500	400	1,100	100	-----	500	100
800	400	-----	-----	100	100	200	-----	-----	-----	-----
2,800	500	100	-----	100	300	1,200	300	-----	200	-----
1,900	200	-----	100	500	200	600	100	-----	200	-----
200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
400	100	-----	100	100	100	100	-----	-----	-----	-----
2,000	600	100	-----	400	300	300	-----	-----	300	-----
2,100	500	100	100	400	200	600	-----	-----	200	-----
1,500	400	-----	-----	200	200	500	-----	-----	100	-----
3,800	700	100	100	800	500	1,000	100	-----	400	-----
1,300	200	200	-----	100	100	500	100	-----	100	-----
700	100	-----	-----	200	100	300	-----	-----	100	-----
300	-----	-----	-----	100	-----	-----	-----	-----	-----	-----
2,500	400	100	-----	600	300	500	-----	-----	400	-----
2,200	-----	200	300	200	300	400	200	100	400	-----
200	-----	-----	-----	-----	-----	-----	-----	-----	100	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
500	-----	100	200	-----	-----	100	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
600	-----	-----	-----	100	100	200	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
300	-----	-----	-----	-----	-----	-----	100	-----	100	-----
200	-----	-----	-----	-----	-----	-----	100	-----	100	-----

**NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL  
NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND HIGHEST DEGREE**

PRODUCTS OR SERVICES	TOTAL	AERO- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL	GE
<b>PRODUCTS OR SERVICES, CONTINUED</b>						
CHEMICALS, ALLIED PROD. - - - - -	20,300	100	12,100	500	900	
THIS FIELD GENERALLY - - - - -	4,300	-----	2,600	100	200	
AGRICULTURAL CHEMICALS - - - - -	500	-----	400	-----	-----	
CARBON PRODUCTS - - - - -	500	-----	200	-----	-----	
CHEMICAL SERVICES - - - - -	100	-----	100	-----	-----	
COSMETICS - - - - -	100	-----	100	-----	-----	
DRUGS AND PHARMACEUTICALS - - - - -	800	-----	400	-----	-----	
DYES AND ORGANIC PIGMENTS - - - - -	100	-----	100	-----	-----	
ELASTOMERS - - - - -	200	-----	200	-----	-----	
EXPLOSIVES - - - - -	300	-----	100	-----	-----	
FERMENTATION PRODUCTS - - - - -	100	-----	100	-----	-----	
FERTILIZER - - - - -	300	-----	200	-----	-----	
GASES - - - - -	400	-----	100	-----	-----	
INDUSTRIAL CHEMICALS - - - - -	1,900	-----	1,200	100	100	
INORGANICS - - - - -	500	-----	300	-----	-----	
NUCLEAR, RADIOACT. MATERIALS - - - - -	1,000	-----	400	-----	100	
ORGANICS - - - - -	1,000	-----	800	-----	-----	
PAINTS AND COATINGS - - - - -	300	-----	200	-----	-----	
PETROCHEMICALS - - - - -	2,200	-----	1,500	100	100	
PHOTOGRAPHIC CHEMICALS - - - - -	200	-----	100	-----	-----	
PLASTICS, SYNTHETIC POLYMERS - - - - -	2,700	-----	1,700	-----	100	
PROPELLANTS - - - - -	300	-----	100	-----	-----	
SOAP AND DETERGENTS - - - - -	400	-----	200	-----	-----	
SYNTHETIC FIBERS - - - - -	1,000	-----	500	-----	-----	
OTHER - - - - -	1,100	-----	600	-----	100	
<b>COMMUNICATIONS</b>						
THIS FIELD GENERALLY - - - - -	8,100	100	100	200	5,400	
BROADCASTING - - - - -	2,600	-----	100	-----	1,700	
CABLE TELEVISION - - - - -	500	-----	-----	-----	400	
COMMUNICATION SERVICES - - - - -	100	-----	-----	-----	100	
MOTION PICTURES - - - - -	1,100	-----	-----	-----	800	
TELEGRAPH - - - - -	100	-----	-----	-----	100	
TELEPHONE - - - - -	2,800	-----	-----	100	1,800	
OTHER - - - - -	800	-----	-----	-----	600	

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND HIGHEST DEGREE CURRICULA GROUPS--CONTINUED

HIGHEST DEGREE CURRICULA GROUPS											
	TOTAL	AERO- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL	GENERAL	MECHAN- ICAL	METAL- LURGICAL	MINERAL	OTHER	NO REPORT OF CUR- RICULUM
CONTINUED											
- - - -	20,300	100	12,100	500	900	1,100	2,700	300	200	2,200	200
- - - -	4,300	-----	2,600	100	200	200	500	100	-----	400	-----
- - - -	500	-----	400	-----	-----	-----	-----	-----	-----	-----	-----
- - - -	500	-----	200	-----	-----	-----	100	-----	-----	-----	-----
- - - -	100	-----	100	-----	-----	-----	-----	-----	-----	-----	-----
- - - -	100	-----	100	-----	-----	-----	-----	-----	-----	-----	-----
- - - -	800	-----	400	-----	-----	100	100	-----	-----	100	-----
- - - -	100	-----	100	-----	-----	-----	-----	-----	-----	-----	-----
- - - -	200	-----	200	-----	-----	-----	-----	-----	-----	-----	-----
- - - -	300	-----	100	-----	-----	-----	-----	-----	100	-----	-----
- - - -	100	-----	100	-----	-----	-----	-----	-----	-----	-----	-----
- - - -	300	-----	200	-----	-----	-----	-----	-----	-----	-----	-----
- - - -	400	-----	100	-----	-----	-----	100	-----	-----	100	-----
- - - -	1,900	-----	1,200	100	100	-----	300	-----	-----	200	-----
- - - -	500	-----	300	-----	-----	-----	-----	-----	-----	100	-----
S - - -	1,000	-----	400	-----	100	100	100	100	-----	100	-----
- - - -	1,000	-----	800	-----	-----	-----	100	-----	-----	100	-----
- - - -	300	-----	200	-----	-----	-----	-----	-----	-----	100	-----
- - - -	2,200	-----	1,500	100	100	-----	300	-----	-----	200	-----
- - - -	200	-----	100	-----	-----	-----	-----	-----	-----	-----	-----
S - - -	2,700	-----	1,700	-----	100	200	400	-----	-----	300	-----
- - - -	300	-----	100	-----	-----	100	-----	-----	-----	-----	-----
- - - -	400	-----	200	-----	-----	-----	100	-----	-----	-----	-----
- - - -	1,000	-----	500	-----	-----	100	300	-----	-----	100	-----
- - - -	1,100	-----	600	-----	100	100	100	-----	-----	100	-----
- - - -	8,100	100	100	200	5,400	700	400	100	-----	900	300
- - - -	2,600	-----	100	-----	1,700	200	100	-----	-----	300	100
- - - -	500	-----	-----	-----	400	-----	-----	-----	-----	-----	-----
- - - -	100	-----	-----	-----	100	-----	-----	-----	-----	-----	-----
- - - -	1,100	-----	-----	-----	800	100	-----	-----	-----	100	-----
- - - -	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
- - - -	100	-----	-----	-----	100	-----	-----	-----	-----	-----	-----
- - - -	2,800	-----	-----	100	1,800	200	200	-----	-----	300	100
- - - -	800	-----	-----	-----	600	-----	100	-----	-----	100	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL  
NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND HIGHEST DEGREE

PRODUCTS OR SERVICES	TOTAL	AERO-SPACE	CHEMICAL	CIVIL	ELEC-TRICAL
PRODUCTS OR SERVICES, CONTINUED					
COMPUTERS - - - - -	11,100	300	500	400	5,500
THIS FIELD GENERALLY - - - - -	4,000	100	200	100	1,900
ANALOG EQUIPMENT - - - - -	200	-----	-----	-----	100
COMPONENTS AND PARTS - - - - -	400	-----	-----	-----	100
COMPUTER SERVICES - - - - -	1,000	-----	100	100	300
DIGITAL EQUIPMENT - - - - -	1,900	-----	-----	-----	1,500
HYBRID EQUIPMENT - - - - -	200	-----	-----	-----	100
MEMORY UNITS - - - - -	300	-----	-----	-----	200
OPTICAL EQUIPMENT - - - - -	100	-----	-----	-----	-----
PERIPHERAL EQUIPMENT - - - - -	1,100	-----	-----	-----	600
SOFTWARE - - - - -	1,400	100	100	100	400
OTHER - - - - -	500	-----	-----	-----	200
CONSTRUCTION, CIVIL ENGR. - - - - -	49,200	400	1,000	34,700	1,500
THIS FIELD GENERALLY - - - - -	10,600	100	200	7,400	400
AIRPORTS AND FACILITIES - - - - -	700	-----	-----	500	-----
ARCHITECTURE - - - - -	600	-----	-----	400	-----
BRIDGES - - - - -	2,200	-----	-----	1,900	-----
BUILDINGS AND STRUCTURES - - - - -	8,100	100	100	5,700	200
CHEMICAL PLANTS, FACILITIES - - - - -	1,700	-----	500	600	100
CITY, REGION, URBAN PLANNING - - - - -	700	-----	-----	400	-----
CONSTRUCTION SERVICES - - - - -	900	-----	-----	600	-----
DAMS, WATER CONTROL STRUCT. - - - - -	2,600	-----	-----	1,900	-----
EXCAVATION AND FOUNDATION - - - - -	700	-----	-----	500	-----
HEAVY CONSTRUCTION - - - - -	1,100	-----	-----	900	-----
HIGHWAYS - - - - -	5,200	-----	-----	4,400	-----
HYDRO-ELECTRIC FACILITIES - - - - -	500	-----	-----	300	100
INDUST. PLANTS, FACILITIES - - - - -	2,100	-----	100	900	300
LANDSCAPING - - - - -	-----	-----	-----	-----	-----
MILITARY CONSTRUCTION - - - - -	1,200	-----	-----	700	-----
PREFABRICATED CONSTRUCTION - - - - -	300	-----	-----	200	-----
PUBLIC WORKS - - - - -	2,700	-----	-----	2,200	-----
RECREATIONAL FACILITIES - - - - -	100	-----	-----	100	-----
RIVERS AND HARBORS - - - - -	500	-----	-----	400	-----
SANITARY FACILITIES - - - - -	1,900	-----	-----	1,600	-----
SPACECRAFT, MISSILE FACILIT. - - - - -	200	-----	-----	100	-----
SURVEYING AND MAPPING - - - - -	700	-----	-----	400	-----
THIN-SHELL CONSTRUCTION - - - - -	100	-----	-----	100	-----
TUNNELING - - - - -	200	-----	-----	100	-----
WATER SUPPLY AND TREATMENT - - - - -	1,400	-----	100	1,000	-----
OTHER - - - - -	2,200	-----	100	1,400	100

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

PERSONNEL MEETING CRITERIA BY PRODUCTS OR SERVICES AND HIGHEST DEGREE CURRICULA GROUPS--CONTINUED

HIGHEST DEGREE CURRICULA GROUPS

TOTAL	AERO- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL	GENERAL	MECHAN- ICAL	METAL- LURGICAL	MINERAL	OTHER	NO REPORT OF CUR- RICULUM
11,100	300	500	400	5,500	1,400	1,100	100	100	1,500	100
4,000	100	200	100	1,900	500	400	-----	100	700	-----
200	-----	-----	-----	100	-----	-----	-----	-----	-----	-----
400	-----	-----	-----	100	100	100	-----	-----	100	-----
1,000	-----	100	100	300	200	100	-----	-----	200	-----
1,900	-----	-----	-----	1,500	100	100	-----	-----	100	-----
200	-----	-----	-----	100	-----	-----	-----	-----	-----	-----
300	-----	-----	-----	200	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1,100	-----	-----	-----	600	100	200	-----	-----	100	-----
1,400	100	100	100	400	200	200	-----	100	300	-----
500	-----	-----	-----	200	100	-----	-----	-----	100	-----
49,200	400	1,000	34,700	1,500	1,500	3,700	100	900	3,600	1,900
10,600	100	200	7,400	400	300	800	-----	200	700	500
700	-----	-----	500	-----	-----	-----	-----	-----	-----	-----
600	-----	-----	400	-----	-----	100	-----	-----	-----	-----
2,200	-----	-----	1,900	-----	-----	-----	-----	-----	-----	100
8,100	100	100	5,700	200	300	900	-----	-----	600	300
1,700	-----	500	600	100	100	300	-----	-----	100	-----
700	-----	-----	400	-----	-----	-----	-----	-----	100	-----
900	-----	-----	600	-----	-----	100	-----	-----	100	-----
2,600	-----	-----	1,900	-----	-----	100	-----	100	400	100
700	-----	-----	500	-----	-----	-----	-----	100	-----	-----
1,100	-----	-----	900	-----	-----	100	-----	-----	-----	-----
5,200	-----	-----	4,400	-----	-----	-----	-----	100	200	300
500	-----	-----	300	100	-----	100	-----	-----	-----	-----
2,100	-----	100	900	300	100	500	-----	-----	100	100
1,200	-----	-----	700	-----	100	100	-----	-----	200	-----
300	-----	-----	200	-----	-----	-----	-----	-----	-----	-----
2,700	-----	-----	2,200	-----	-----	100	-----	-----	200	100
100	-----	-----	100	-----	-----	-----	-----	-----	-----	-----
500	-----	-----	400	-----	-----	-----	-----	-----	-----	-----
1,900	-----	-----	1,600	-----	-----	100	-----	-----	100	-----
200	-----	-----	100	-----	-----	-----	-----	-----	-----	-----
700	-----	-----	400	-----	-----	-----	-----	-----	100	100
100	-----	-----	100	-----	-----	-----	-----	-----	-----	-----
200	-----	-----	100	-----	-----	-----	-----	100	-----	-----
1,400	-----	100	1,000	-----	-----	100	-----	-----	100	-----
2,200	-----	100	1,400	100	100	200	-----	-----	300	-----



**NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL**  
**NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND HIGHEST DEGREE CURRICULUM**

PRODUCTS OR SERVICES	TOTAL	AERO- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL	GENERAL
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**PRODUCTS OR SERVICES, CONTINUED**

EDUC., INFORMATION SERV. - - -	15,400	500	1,400	2,500	2,000	2,400
THIS FIELD GENERALLY - - -	2,500	100	300	300	300	400
ENGINEERING INSTRUCTION - - -	10,400	400	900	1,900	1,400	1,600
INFORMATION SERVICES - - -	400	-----	100	-----	100	100
LIBRARIES - - -	-----	-----	-----	-----	-----	-----
TECHNICAL INSTRUCTION - - -	1,200	-----	-----	100	200	200
OTHER - - -	900	-----	-----	200	100	100
 ELECTRICAL EQUIP., SERV. - - -	 20,400	 200	 400	 300	 13,200	 1,300
THIS FIELD GENERALLY - - -	4,100	-----	-----	-----	3,200	200
BUSINESS, OFFICE EQUIPMENT - - -	600	-----	-----	-----	200	100
COMPONENTS AND ACCESSORIES - - -	800	-----	-----	-----	400	100
CONTROLS - - -	1,500	-----	-----	-----	900	100
ELECTRICAL SERVICES - - -	400	-----	-----	-----	300	-----
HOUSEHOLD APPLIANCES - - -	600	-----	-----	-----	200	100
INDUSTRIAL ELEC. EQUIPMENT - - -	2,800	-----	-----	-----	2,100	100
INSTRUMENTS, TEST EQUIPMENT - - -	1,300	-----	100	-----	600	100
INSULATED CONDUCTORS - - -	400	-----	-----	-----	200	-----
LIGHTING AND WIRING - - -	500	-----	-----	-----	400	-----
MAGNETIC DEVICES - - -	300	-----	-----	-----	200	-----
POWER GENERATION - - -	2,200	-----	100	100	1,100	200
RURAL ELECTRIFICATION - - -	200	-----	-----	-----	100	-----
STORAGE BATTERIES - - -	100	-----	-----	-----	-----	-----
SWITCHGEAR - - -	600	-----	-----	-----	500	-----
TELEPHONE EQUIPMENT - - -	600	-----	-----	-----	300	100
TRANSFORMERS - - -	900	-----	-----	-----	600	100
TRANSMISSION, DISTRIBUTION - - -	1,700	-----	-----	100	1,300	100
WELDING APPARATUS - - -	200	-----	-----	-----	100	-----
OTHER - - -	800	-----	-----	-----	500	100

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## CRITERIA BY PRODUCTS OR SERVICES AND HIGHEST DEGREE CURRICULA GROUPS--CONTINUED

## HIGHEST DEGREE CURRICULA GROUPS

CTAL	AERO- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL	GENERAL	MECHAN- ICAL	METAL- LURGICAL	MINERAL	OTHER	NO REPORT OF CUR- RICULUM
400	500	1,400	2,500	2,000	2,400	3,100	600	500	2,400	100
500	100	300	300	300	400	400	100	100	400	-----
400	400	900	1,900	1,400	1,600	2,400	400	100	1,200	-----
400	-----	100	-----	100	100	100	-----	-----	100	-----
200	-----	-----	100	200	200	200	-----	100	300	-----
900	-----	-----	200	100	100	100	-----	100	300	-----
400	200	400	300	13,200	1,300	2,600	300	-----	1,600	500
100	-----	-----	-----	3,200	200	200	-----	-----	300	200
600	-----	-----	-----	200	100	200	-----	-----	100	-----
800	-----	-----	-----	400	100	100	-----	-----	100	-----
500	-----	-----	-----	900	100	200	-----	-----	100	-----
400	-----	-----	-----	300	-----	-----	-----	-----	100	-----
600	-----	-----	-----	200	100	200	-----	-----	100	-----
800	-----	-----	-----	2,100	100	300	-----	-----	200	100
300	-----	100	-----	600	100	200	-----	-----	200	-----
400	-----	-----	-----	200	-----	-----	-----	-----	100	-----
500	-----	-----	-----	400	-----	100	-----	-----	-----	-----
300	-----	-----	-----	200	-----	-----	-----	-----	-----	-----
200	-----	100	100	1,100	200	600	-----	-----	200	-----
200	-----	-----	-----	100	-----	-----	-----	-----	100	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
600	-----	-----	-----	500	-----	-----	-----	-----	-----	-----
600	-----	-----	-----	300	100	100	-----	-----	100	-----
900	-----	-----	-----	600	100	100	-----	-----	-----	-----
700	-----	-----	100	1,300	100	100	-----	-----	100	100
200	-----	-----	-----	100	-----	-----	-----	-----	-----	-----
800	-----	-----	-----	500	100	100	-----	-----	100	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL  
NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND HIGHEST DEGREE

PRODUCTS OR SERVICES	TOTAL	AERO-SPACE	CHEMICAL	CIVIL	ELECTRICAL
PRODUCTS OR SERVICES, CONTINUED					
ELECTRONIC EQUIP., SERV. - - -	23,500	400	400	200	15,100
THIS FIELD GENERALLY - - - - -	5,500	100	100	-----	3,500
ANTENNAS - - - - -	700	-----	-----	-----	500
AUDIO - - - - -	200	-----	-----	-----	100
COMPONENTS AND ACCESSORIES - - -	900	-----	-----	-----	500
CONTROLS - - - - -	1,000	-----	100	-----	700
ELECTROACOUSTIC TRANSDUCERS - - -	-----	-----	-----	-----	-----
ELECTRO-OPTICAL DEVICES - - - - -	900	-----	-----	-----	600
ELECTRON TUBES - - - - -	800	-----	-----	-----	500
ELECTRONIC EQUIP. GENERALLY - - -	3,300	100	-----	-----	2,300
ELECTRONIC SERVICES - - - - -	200	-----	-----	-----	200
INSTRUMENTS, TEST EQUIPMENT - - -	2,700	-----	100	-----	1,700
INTEGRATED CIRCUITS - - - - -	700	-----	-----	-----	400
LASERS - - - - -	200	-----	-----	-----	100
MICROWAVE AND RADAR - - - - -	2,600	-----	-----	-----	2,000
RADIO AND TV RECEIVERS - - - - -	400	-----	-----	-----	300
RADIO AND TV TRANSMITTERS - - -	100	-----	-----	-----	100
RECORDING - - - - -	200	-----	-----	-----	100
SEMICONDUCTOR DEVICES - - - - -	1,000	-----	-----	-----	500
SONAR - - - - -	600	-----	-----	-----	400
SONIC, ULTRASONIC DEVICES - - - -	100	-----	-----	-----	100
THERMO-ELECTRIC DEVICES - - - - -	100	-----	-----	-----	-----
X-RAY - - - - -	100	-----	-----	-----	100
OTHER - - - - -	1,200	-----	-----	-----	700
LAB-SCI-PHOTO-OPT EQUIP. - - - -	2,900	100	200	100	700
THIS FIELD GENERALLY - - - - -	700	-----	100	-----	200
LAB., SCIENTIFIC APPARATUS - - - -	500	-----	100	-----	100
MEASURING, CONTROL INSTRUM. - - -	800	-----	-----	-----	200
OPTICAL INSTRUMENTS, LENSES - - -	200	-----	-----	-----	100
PHOTOGRAPHIC EQUIPMENT - - - - -	300	-----	-----	-----	100
TEMPERATURE MEASUREMENT - - - - -	200	-----	-----	-----	-----
TIMING DEVICES - - - - -	-----	-----	-----	-----	-----
OTHER - - - - -	200	-----	-----	-----	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969  
 MEETING CRITERIA BY PRODUCTS OR SERVICES AND HIGHEST DEGREE CURRICULA GROUPS--CONTINUED

HIGHEST DEGREE CURRICULA GROUPS										
TOTAL	AERO- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL	GENERAL	MECHAN- ICAL	METAL- LURGICAL	MINERAL	OTHER	NO REPORT OF CUR- RICULUM
23,500	400	400	200	15,100	2,000	1,800	300	100	3,000	400
5,500	100	100	-----	3,500	500	300	100	-----	800	100
700	-----	-----	-----	500	-----	100	-----	-----	100	-----
200	-----	-----	-----	100	-----	-----	-----	-----	-----	-----
900	-----	-----	-----	500	100	200	-----	-----	100	-----
1,000	-----	100	-----	700	-----	100	-----	-----	100	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	100	-----
900	-----	-----	-----	600	100	100	-----	-----	100	-----
800	-----	-----	-----	500	100	-----	-----	-----	200	-----
3,300	100	-----	-----	2,300	200	300	-----	-----	300	100
200	-----	-----	-----	200	-----	-----	-----	-----	-----	-----
2,700	-----	100	-----	1,700	200	300	-----	-----	300	-----
700	-----	-----	-----	400	100	-----	-----	-----	100	-----
200	-----	-----	-----	100	-----	-----	-----	-----	-----	-----
2,600	-----	-----	-----	2,000	100	100	-----	-----	300	-----
400	-----	-----	-----	300	-----	-----	-----	-----	100	-----
100	-----	-----	-----	100	-----	-----	-----	-----	-----	-----
200	-----	-----	-----	100	-----	-----	-----	-----	-----	-----
1,000	-----	-----	-----	500	200	100	100	-----	200	-----
600	-----	-----	-----	400	100	-----	-----	-----	100	-----
100	-----	-----	-----	100	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1,200	-----	-----	-----	100	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	700	100	200	-----	-----	200	-----
2,900	100	200	100	700	400	700	100	-----	500	100
700	-----	100	-----	200	100	100	-----	-----	100	-----
500	-----	100	-----	100	100	100	-----	-----	-----	-----
800	-----	-----	-----	200	100	200	-----	-----	100	-----
200	-----	-----	-----	100	-----	100	-----	-----	-----	-----
300	-----	-----	-----	100	-----	100	-----	-----	100	-----
200	-----	-----	-----	-----	-----	100	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	-----	-----	-----	-----	-----	100	-----	-----	-----	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL,  
NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND HIGHEST DEGREE

PRODUCTS OR SERVICES	TOTAL	HIGHEST DEGREE CURRICULUM					
		AERO- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL	GENERAL	M
PRODUCTS OR SERVICES, CONTINUED							
MACHINERY, MECH. EQUIP. - - -	30,100	500	1,100	1,200	2,100	3,000	14
THIS FIELD GENERALLY - - - -	5,100	100	200	200	200	500	-
AIR COMPRESSORS, BLOWERS - - -	900	-----	-----	-----	100	100	-
AIR CONDITIONING, HEATING - - -	8,300	100	200	400	500	700	-
BEARINGS - - - - -	500	-----	-----	-----	-----	100	-
CONSTRUCTION EQUIPMENT - - - -	600	-----	-----	100	-----	100	-
DIES, JIGS, PATTERNS - - - - -	100	-----	-----	-----	-----	-----	-
DISTILLING EQUIPMENT - - - - -	100	-----	-----	-----	-----	-----	-
FARM MACHINERY - - - - -	1,400	-----	-----	-----	-----	100	-
FOOD MACHINERY - - - - -	200	-----	-----	-----	-----	-----	-
FURNACES, HEATING EQUIPMENT - -	900	-----	100	-----	100	100	-
GEARS - - - - -	100	-----	-----	-----	-----	-----	-
HYDRAULIC MACHINERY - - - - -	400	-----	-----	-----	-----	-----	-
INDUSTRIAL MACHINERY, EQUIP. - - -	1,400	-----	100	-----	200	200	-
INTERNAL COMBUSTION ENGINES - - -	500	-----	-----	-----	-----	100	-
MACHINE TOOLS, ACCESSORIES - - -	700	-----	-----	-----	100	200	-
MATERIALS HANDLING MACH. - - - -	800	-----	-----	100	100	100	-
MINING MACHINERY - - - - -	300	-----	-----	-----	-----	-----	-
NUCLEAR MACHINERY - - - - -	1,200	100	100	-----	100	100	-
PAPER MACHINERY - - - - -	300	-----	-----	-----	-----	-----	-
PNEUMATIC EQUIPMENT - - - - -	300	-----	-----	-----	-----	100	-
POWER TRANSMISSION EQUIP. - - -	300	-----	-----	-----	-----	-----	-
PRINTING, DUPLICATING MACH. - - -	200	-----	-----	-----	-----	-----	-
PUMPS, LIQUID HANDLING EQUIP - - -	1,200	-----	100	100	-----	100	-
REFRIGERATING EQUIPMENT - - - -	700	-----	-----	-----	100	100	-
SPECIALIZED INDUSTRIAL MACH - - -	1,000	-----	100	-----	100	100	-
STEAM ENGINES - - - - -	100	-----	-----	-----	-----	-----	-
TEXTILE MACHINERY - - - - -	200	-----	-----	-----	-----	-----	-
TURBINES - - - - -	800	-----	-----	-----	100	100	-
VENDING, SERVICE MACHINERY - - -	-----	-----	-----	-----	-----	-----	-
OTHER - - - - -	1,500	-----	100	100	100	100	-

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## EETING CRITERIA BY PRODUCTS OR SERVICES AND HIGHEST DEGREE CURRICULA GROUPS--CONTINUED

## HIGHEST DEGREE CURRICULA GROUPS

TOTAL	AERG- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL	GENERAL	MECHAN- ICAL	METAL- LURGICAL	MINERAL	OTHER	NO REPORT OF CUR- RICULUM
30,100	500	1,100	1,200	2,100	3,000	16,500	700	400	3,400	1,200
5,100	100	200	200	200	500	3,200	-----	100	400	300
900	-----	-----	-----	100	100	600	-----	-----	100	-----
8,300	100	200	400	500	700	5,100	100	-----	600	500
500	-----	-----	-----	-----	100	300	100	-----	100	-----
600	-----	-----	100	-----	100	200	100	-----	100	-----
100	-----	-----	-----	-----	-----	100	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1,400	-----	-----	-----	-----	100	300	-----	-----	900	-----
200	-----	-----	-----	-----	-----	100	-----	-----	-----	-----
900	-----	100	-----	100	100	400	100	-----	100	-----
100	-----	-----	-----	-----	-----	100	-----	-----	-----	-----
400	-----	-----	-----	-----	-----	300	-----	-----	100	-----
1,400	-----	100	-----	200	200	700	-----	-----	100	-----
500	-----	-----	-----	-----	100	300	-----	-----	-----	-----
700	-----	-----	-----	100	200	300	-----	-----	100	-----
800	-----	-----	100	100	100	400	-----	-----	100	-----
300	-----	-----	-----	-----	-----	100	-----	100	-----	-----
1,200	100	100	-----	100	100	600	-----	-----	100	-----
300	-----	-----	-----	-----	-----	200	-----	-----	-----	-----
300	-----	-----	-----	-----	100	200	-----	-----	-----	-----
300	-----	-----	-----	-----	-----	200	-----	-----	-----	-----
200	-----	-----	-----	-----	-----	100	-----	-----	-----	-----
1,200	-----	100	100	-----	100	600	-----	-----	100	-----
700	-----	-----	-----	100	100	400	-----	-----	100	-----
1,000	-----	100	-----	100	100	400	-----	-----	100	100
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	-----	-----	-----	-----	-----	100	-----	-----	-----	-----
800	-----	-----	-----	100	100	600	-----	-----	-----	-----
1,500	-----	100	100	100	100	700	-----	-----	200	-----

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NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND HIGHEST DEGREE

PRODUCTS OR SERVICES	TOTAL	AERO- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL	G
PRODUCTS OR SERVICES, CONTINUED						
MARINE TRANSPORTATION - - - - -	5,000	200	100	400	500	
THIS FIELD GENERALLY - - - - -	700	-----	-----	100	100	
BOATS AND SMALL CRAFT - - - - -	200	-----	-----	-----	-----	
INLAND WATERWAY CRAFT, SERV. - - - - -	-----	-----	-----	-----	-----	
MARINE AUXILIARIES - - - - -	100	-----	-----	-----	-----	
MARINE ENGINES - - - - -	100	-----	-----	-----	-----	
MERCHANT SHIPS - - - - -	300	-----	-----	-----	-----	
NAVAL ARCHITECTURAL SER. - - - - -	700	-----	-----	100	-----	
NAVAL VESSELS - - - - -	1,000	-----	-----	100	100	
OCEAN TRANSPORTATION - - - - -	200	-----	-----	-----	-----	
PORT FACILITIES, SERVICES - - - - -	100	-----	-----	-----	-----	
PROPELLERS AND SHAFTING - - - - -	-----	-----	-----	-----	-----	
SHIPBUILDING, REPAIR SERVICE - - - - -	800	-----	-----	100	100	
UNDERWATER CRAFT - - - - -	400	-----	-----	-----	100	
OTHER - - - - -	300	-----	-----	-----	100	
MEDICAL, HEALTH SERVICES - - - - -	1,300	-----	200	100	200	
THIS FIELD GENERALLY - - - - -	400	-----	-----	100	-----	
ARTIFICIAL ORGANS - - - - -	100	-----	-----	-----	-----	
MEDICAL AND HEALTH CARE - - - - -	200	-----	-----	-----	-----	
MEDICAL, DENTAL INSTRUMENTS - - - - -	200	-----	-----	-----	100	
MEDICAL LABORATORY SERVICES - - - - -	-----	-----	-----	-----	-----	
PROSTHETIC DEVICES - - - - -	-----	-----	-----	-----	-----	
OTHER - - - - -	400	-----	100	-----	100	
METALS, BASIC - - - - -	13,500	200	1,300	400	600	
THIS FIELD GENERALLY - - - - -	2,600	-----	200	-----	-----	
ALUMINUM - - - - -	1,300	-----	200	100	100	
COPPER - - - - -	500	-----	-----	-----	-----	
ELECTROMETALLURGICAL PROD. - - - - -	200	-----	-----	-----	-----	
FOUNDRIES - - - - -	600	-----	100	-----	-----	
IRON-STEEL MILLS, FOUNDRIES - - - - -	3,900	100	400	100	300	
LEAD AND ZINC - - - - -	300	-----	100	-----	-----	
METALLURGICAL PRODUCTS - - - - -	800	-----	100	-----	-----	
METALLURGICAL SERVICES - - - - -	1,100	-----	100	-----	-----	
NON-FERROUS SMELTING - - - - -	800	-----	100	-----	-----	
NON-FERROUS CASTINGS - - - - -	200	-----	-----	-----	-----	
RADIOACTIVE METALS - - - - -	100	-----	-----	-----	-----	
RARE METALS - - - - -	-----	-----	-----	-----	-----	
REFRACTORY METALS - - - - -	300	-----	-----	-----	-----	
OTHER - - - - -	900	-----	100	-----	-----	

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ING CRITERIA BY PRODUCTS OR SERVICES AND HIGHEST DEGREE CURRICULA GROUPS--CONTINUED

HIGHEST DEGREE CURRICULA GROUPS

TOTAL	AERO- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL	GENERAL	MECHAN- ICAL	METAL- LURGICAL	MINERAL	OTHER	NO REPORT OF CUR- RICULUM
5,000	200	100	400	500	500	1,600	100	-----	1,400	100
700	-----	-----	100	100	100	200	-----	-----	200	-----
200	-----	-----	-----	-----	-----	-----	-----	-----	100	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	100	-----	-----	-----	-----
300	-----	-----	-----	-----	-----	200	-----	-----	100	-----
700	-----	-----	100	-----	100	100	-----	-----	300	-----
1,000	-----	-----	100	100	100	300	100	-----	300	-----
200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
800	-----	-----	100	100	100	300	-----	-----	200	-----
400	-----	-----	-----	100	-----	200	-----	-----	100	-----
300	-----	-----	-----	100	-----	100	-----	-----	100	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1,300	-----	200	100	200	200	200	-----	-----	300	-----
400	-----	-----	100	-----	100	100	-----	-----	100	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	-----	-----	-----	-----	-----	-----	-----	-----	100	-----
200	-----	-----	-----	100	-----	100	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
400	-----	100	-----	100	100	-----	-----	-----	100	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
13,500	200	1,300	400	600	1,300	1,300	6,800	400	1,100	100
2,600	-----	200	-----	-----	200	100	1,600	100	100	-----
1,300	-----	200	100	100	200	300	400	-----	100	-----
500	-----	-----	-----	-----	-----	-----	200	100	100	-----
200	-----	-----	-----	-----	-----	-----	100	-----	-----	-----
600	-----	100	-----	-----	100	100	300	-----	-----	-----
3,900	100	400	100	300	400	500	1,600	100	400	100
300	-----	100	-----	-----	-----	-----	100	-----	-----	-----
800	-----	100	-----	-----	100	100	500	-----	100	-----
1,100	-----	100	-----	-----	100	-----	700	-----	100	-----
800	-----	100	-----	-----	-----	100	400	100	-----	-----
200	-----	-----	-----	-----	-----	-----	100	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	100	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
300	-----	-----	-----	-----	-----	-----	200	-----	-----	-----
900	-----	100	-----	-----	100	-----	500	-----	-----	-----



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NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND HIGHEST DE

HIGHEST DEGREE CURR

PRODUCTS OR SERVICES	TOTAL	AERO- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL	GENERAL
PRODUCTS OR SERVICES, CONTINUED						
METAL FABRICATED PROD. - - -	6,500	100	300	800	300	1,000
THIS FIELD GENERALLY - - - -	1,400	-----	100	100	100	200
BOILERS - - - - -	500	-----	-----	-----	-----	100
CANS AND CONTAINERS - - - - -	100	-----	-----	-----	-----	-----
ELECTROPLATED, COATED PROD. - - -	200	-----	100	-----	-----	-----
HARDWARE - - - - -	100	-----	-----	-----	-----	-----
MACHINED OR TURNED PRODUCTS - - -	300	-----	-----	-----	-----	100
METAL FABRICATION SERVICES - - -	400	-----	-----	-----	-----	100
PIPE, FITTINGS, VALVES - - - -	700	-----	-----	-----	-----	100
PRESSURE VESSELS - - - - -	600	-----	-----	100	-----	100
SHEET METAL PRODUCTS - - - - -	300	-----	-----	-----	-----	100
STAMPINGS - - - - -	200	-----	-----	-----	-----	-----
STRUCTURAL STEEL PRODUCTS - - -	400	-----	-----	400	-----	-----
WELDMENTS - - - - -	200	-----	-----	-----	-----	-----
WIRE PRODUCTS - - - - -	300	-----	-----	-----	-----	100
OTHER - - - - -	700	-----	-----	100	-----	100
MINING - - - - -	6,600	100	200	300	200	200
THIS FIELD GENERALLY - - - - -	2,000	-----	-----	-----	100	-----
COAL - - - - -	800	-----	-----	100	-----	-----
IRON ORES - - - - -	600	-----	-----	100	-----	-----
MINING SERVICES - - - - -	300	-----	-----	-----	-----	-----
NON-FERROUS METAL ORES - - - -	1,400	-----	-----	-----	100	-----
NON-METALLIC MINERALS - - - - -	500	-----	-----	100	-----	-----
QUARRY PRODUCTS - - - - -	200	-----	-----	100	-----	-----
SULFUR - - - - -	100	-----	-----	-----	-----	-----
URANIUM, RADIOACTIVE ORES - - -	300	-----	-----	-----	-----	-----
OTHER - - - - -	300	-----	-----	-----	-----	-----
MOTOR VEHICLE TRANS. - - - - -	2,600	100	100	300	300	500
THIS FIELD GENERALLY - - - - -	500	-----	-----	100	-----	100
AUTOMOBILES - - - - -	800	-----	-----	-----	100	100
BUSES, TRUCKS, TRAILERS - - - -	300	-----	-----	-----	-----	100
ENGINES - - - - -	200	-----	-----	-----	-----	-----
MOTORCYCLES, ETC. - - - - -	-----	-----	-----	-----	-----	-----
MOTOR TRANSPORTATION SERV. - - -	-----	-----	-----	-----	-----	-----
PARTS AND ACCESSORIES - - - - -	600	-----	-----	-----	100	100
OTHER - - - - -	200	-----	-----	-----	-----	-----

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## CLASSIFICATION CRITERIA BY PRODUCTS OR SERVICES AND HIGHEST DEGREE CURRICULA GROUPS--CONTINUED

## HIGHEST DEGREE CURRICULA GROUPS

TOTAL	AERO- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL	GENERAL	MECHAN- ICAL	METAL- LURGICAL	MINERAL	OTHER	NO REPORT OF CUR- RICULUM
6,500	100	300	800	300	1,000	2,200	900	100	500	200
1,400	-----	100	100	100	200	500	300	-----	100	-----
500	-----	-----	-----	-----	100	300	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	-----	100	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	100	-----	-----	-----	-----
300	-----	-----	-----	-----	100	100	-----	-----	-----	-----
400	-----	-----	-----	-----	100	100	100	-----	-----	-----
700	-----	-----	-----	-----	100	300	100	-----	100	-----
600	-----	-----	100	-----	100	300	-----	-----	-----	-----
300	-----	-----	-----	-----	100	100	-----	-----	100	-----
200	-----	-----	-----	-----	-----	100	-----	-----	-----	-----
400	-----	-----	400	-----	-----	-----	-----	-----	-----	-----
200	-----	-----	-----	-----	-----	100	100	-----	-----	-----
300	-----	-----	-----	-----	100	100	100	-----	-----	-----
700	-----	-----	100	-----	100	200	100	-----	100	-----
6,600	100	200	300	200	200	300	500	4,500	300	100
2,000	-----	-----	-----	100	-----	100	100	1,600	100	-----
800	-----	-----	100	-----	-----	100	-----	500	100	-----
600	-----	-----	100	-----	-----	-----	100	300	-----	-----
300	-----	-----	-----	-----	-----	-----	-----	200	-----	-----
1,400	-----	-----	-----	100	-----	-----	100	1,000	100	-----
500	-----	-----	100	-----	-----	-----	-----	300	-----	-----
200	-----	-----	100	-----	-----	-----	-----	100	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
300	-----	-----	-----	-----	-----	-----	-----	200	-----	-----
300	-----	-----	-----	-----	-----	-----	-----	300	-----	-----
2,600	100	100	300	300	500	900	200	-----	300	-----
500	-----	-----	100	-----	100	100	100	-----	-----	-----
800	-----	-----	-----	100	100	300	100	-----	100	-----
300	-----	-----	-----	-----	100	100	-----	-----	-----	-----
200	-----	-----	-----	-----	-----	100	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
600	-----	-----	-----	100	100	200	-----	-----	100	-----
200	-----	-----	-----	-----	-----	100	-----	-----	-----	-----

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NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND

		HIGHEST			
PRODUCTS OR SERVICES	TOTAL	AERO- SPACE	CHEMICAL	CIVIL	EL TRI
PRODUCTS OR SERVICES, CONTINUED					
ORDNANCE - - - - -	5,200	500	300	200	1,000
THIS FIELD GENERALLY - - - - -	1,200	100	100	100	100
AMMUNITION - - - - -	300	-----	-----	-----	-----
FIRE CONTROL EQUIPMENT - - - - -	500	-----	-----	-----	-----
GUIDED MISSILES - - - - -	2,100	300	100	-----	-----
GUNS - - - - -	100	-----	-----	-----	-----
ORDNANCE SERVICES - - - - -	100	-----	-----	-----	-----
SMALL ARMS - - - - -	100	-----	-----	-----	-----
TANKS - - - - -	100	-----	-----	-----	-----
OTHER - - - - -	800	100	-----	-----	-----
PETROLEUM - - - - -	16,100	200	3,000	900	-----
THIS FIELD GENERALLY - - - - -	6,000	100	1,200	300	-----
ASPHALT MATERIALS - - - - -	100	-----	-----	-----	-----
CRUDE PETROLEUM - - - - -	1,700	-----	200	100	-----
GAS PIPELINES - - - - -	400	-----	-----	100	-----
LIQUIFIED GAS - - - - -	100	-----	-----	-----	-----
LUBRICATING OIL AND GREASE - - - - -	200	-----	100	-----	-----
NATURAL GAS - - - - -	600	-----	100	100	-----
OILFIELD SERVICES - - - - -	1,400	-----	100	-----	-----
OIL PIPELINES - - - - -	300	-----	-----	-----	-----
REFINERY PRODUCTS - - - - -	1,500	-----	900	100	-----
RESERVOIRS (OIL AND GAS) - - - - -	2,400	-----	200	100	-----
OTHER - - - - -	1,200	-----	200	100	-----
RAILWAY, RAPID TRANSIT - - - - -	1,700	-----	-----	400	-----
THIS FIELD GENERALLY - - - - -	500	-----	-----	200	-----
RAILROAD EQUIPMENT - - - - -	600	-----	-----	-----	-----
RAILROAD TRANSPORTATION - - - - -	200	-----	-----	100	-----
RAILWAY SERVICES - - - - -	-----	-----	-----	-----	-----
RAPID TRANSIT - - - - -	200	-----	-----	100	-----
OTHER - - - - -	100	-----	-----	-----	-----
UTILITIES - - - - -	15,200	100	400	1,700	7,000
THIS FIELD GENERALLY - - - - -	1,100	-----	100	100	100
ELECTRIC UTILITIES - - - - -	8,900	100	100	500	5,000
ELECTRIC AND GAS UTILITIES - - - - -	2,800	-----	-----	200	1,000
GAS UTILITIES - - - - -	800	-----	100	200	-----
SANITARY SERVICES - - - - -	100	-----	-----	100	-----
SEWERAGE, WASTE DISPOSAL SER - - - - -	500	-----	100	300	-----
WATER SUPPLY AND TREATMENT - - - - -	800	-----	100	400	-----
OTHER - - - - -	300	-----	-----	-----	-----

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LISTING CRITERIA BY PRODUCTS OR SERVICES AND HIGHEST DEGREE CURRICULA GROUPS--CONTINUED

HIGHEST DEGREE CURRICULA GROUPS

TOTAL	AERO- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL	GENERAL	MECHAN- ICAL	METAL- LURGICAL	MINERAL	OTHER	NO REPORT OF CUR- RICULUM
5,200	500	300	200	1,400	600	1,500	100	-----	600	100
1,200	100	100	100	200	200	300	-----	-----	200	100
300	-----	-----	-----	-----	-----	100	-----	-----	-----	-----
500	-----	-----	-----	300	-----	100	-----	-----	100	-----
2,100	300	100	-----	600	200	500	-----	-----	200	-----
100	-----	-----	-----	-----	-----	100	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	100	-----	-----	-----	-----
800	100	-----	-----	200	100	300	-----	-----	100	-----
16,100	200	3,000	900	700	600	2,300	100	7,100	1,100	200
6,000	100	1,200	300	300	200	600	-----	2,800	500	100
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1,700	-----	200	100	-----	-----	200	-----	1,000	-----	-----
400	-----	-----	100	100	-----	100	-----	100	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	-----	100	-----	-----	-----	100	-----	-----	-----	-----
600	-----	100	100	-----	-----	100	-----	200	-----	-----
1,400	-----	100	-----	100	100	200	-----	700	100	-----
300	-----	-----	-----	-----	-----	100	-----	-----	-----	-----
1,500	-----	900	100	100	-----	300	-----	-----	200	-----
2,400	-----	200	100	100	-----	200	-----	1,700	200	-----
1,200	-----	200	100	100	100	200	-----	400	100	-----
1,700	-----	-----	400	300	200	400	-----	-----	100	100
500	-----	-----	200	100	-----	100	-----	-----	100	-----
600	-----	-----	100	100	100	300	-----	-----	-----	-----
200	-----	-----	100	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	-----	-----	100	100	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
15,200	100	400	1,700	7,300	600	3,200	100	300	1,100	500
1,100	-----	100	100	300	100	300	-----	-----	100	-----
8,900	100	100	500	5,300	300	1,700	100	-----	700	300
2,800	-----	-----	200	1,600	100	600	-----	-----	100	100
800	-----	100	200	100	-----	200	-----	100	100	-----
100	-----	-----	100	-----	-----	-----	-----	-----	-----	-----
500	-----	100	300	-----	-----	100	-----	-----	-----	-----
800	-----	100	400	100	-----	100	-----	-----	100	-----
-----	-----	-----	-----	100	-----	100	-----	-----	-----	-----

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**NUMBER OF ENGINEERS MEETING CRITERIA BY PRODUCTS OR SERVICES AND HIGHEST DEGREE CURRICULA**

PRODUCTS OR SERVICES	TOTAL	HIGHEST DEGREE CURRICULA GROUPS						
		AERO- SPACE	CHEMICAL	CIVIL	ELEC- TRICAL	GENERAL	MECHAN- ICAL	ME LUR
PRODUCTS OR SERVICES, CONTINUED								
OTHER PRODUCTS, SERVICES - - -	11,800	300	1,300	1,000	1,400	2,200	2,400	
ADVERTISING AND PROMOTION - - -	200							
BANKING AND FINANCE - - - - -	300							
BUILDING MAINTENANCE - - - - -	200						100	
BUSINESS FORMS - - - - -								
CLOTHING - - - - -	100					100		
INSURANCE - - - - -	600			100	100	100	100	
LABORATORY SERVICES - - - - -	500		100	100	100		100	
LEATHER - - - - -								
LUMBER - - - - -								
PAPER - - - - -	600		100		100	100	200	
PAPER PRODUCTS - - - - -	400		100			100	100	
PATENTS AND LEGAL SERVICES - - -	400				100			
PERSONNEL SERVICES - - - - -	300		100			100		
PRINTING, RELATED SERVICES - - -	300					100	100	
PULP - - - - -	200		100					
REGULATORY SERVICES - - - - -	400			100	100		100	
RETAIL TRADE SERVICES - - - - -	100							
RUBBER, FABRICATED PRODUCTS - - -	400		100			100	100	
TEXTILES, TEXTILE PRODUCTS - - -	600		100			200	100	
TIRES - - - - -	100						100	
TOYS AND AMUSEMENTS - - - - -								
WHOLESALE TRADE SERVICES - - - -	100							
WOOD PRODUCTS - - - - -	300			100		100		
OTHER PRODUCT - - - - -	1,600		200	100	200	300	400	
OTHER SERVICE - - - - -	3,800	100	300	400	500	700	700	
NO REPORT - - - - -	1,200		100	200	200	200	100	

**NOTE -** GROUPS MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING. GROUPS OF CURRICULA ARE DEFINED AS AEROSPACE (ASTRONAUTICAL), CIVIL (ARCHITECTURAL, CIVIL, CONSTRUCTION, ENVIRONMENTAL, SANITARY, TRANSPORTATION), ELECTRICAL (COMMUNICATIONS, ELECTRICAL, ELECTRONIC), GENERAL (ENGINEERING MECHANICS, ENGINEERING GENERAL, ENGINEERING SCIENCE, ENGINEERING TECHNOLOGY, INDUSTRIAL, MATERIALS), MECHANICAL (MARINE, MECHANICAL, METALLURGICAL, WELDING), MINERAL (GEOLOGICAL, GEOPHYSICAL, MINERAL, MINING, PETROLEUM), OTHER (BIOENGINEERING, CERAMIC, NAVAL ARCHITECTURE, NUCLEAR, TEXTILE, OTHER ENGINEERING, BUSINESS ADMINISTRATION, PHYSICS, OTHER NONENGINEERING).

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BY PRODUCTS OR SERVICES AND HIGHEST DEGREE CURRICULA GROUPS--CONTINUED

HIGHEST DEGREE CURRICULA GROUPS

RO- ACE	CHEMICAL	CIVIL	ELEC- TRICAL	GENERAL	MECHAN- ICAL	METAL- LURGICAL	MINERAL	OTHER	NO REPORT OF CUR- RICULUM
300	1,300	1,000	1,400	2,200	2,400	200	300	2,400	200
-----	-----	-----	-----	-----	-----	-----	-----	100	-----
-----	-----	-----	-----	-----	-----	-----	100	100	-----
-----	-----	-----	-----	-----	100	-----	-----	-----	-----
-----	-----	-----	-----	100	-----	-----	-----	-----	-----
-----	-----	100	100	100	100	-----	-----	200	-----
-----	100	100	100	-----	100	-----	-----	100	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	100	-----	100	100	200	-----	-----	100	-----
-----	100	-----	-----	100	100	-----	-----	100	-----
-----	-----	-----	100	-----	-----	-----	-----	300	-----
-----	100	-----	-----	100	-----	-----	-----	-----	-----
-----	-----	-----	-----	100	100	-----	-----	100	-----
-----	100	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	100	100	-----	100	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	100	-----	-----	100	100	-----	-----	100	-----
-----	100	-----	-----	200	100	-----	-----	100	-----
-----	-----	-----	-----	-----	100	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	100	-----	100	-----	-----	-----	100	-----
-----	200	100	200	300	400	100	-----	200	-----
00	300	400	500	700	700	100	100	800	100
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	100	200	200	200	100	100	100	200	-----

ENDING. GROUPS OF CURRICULA ARE DEFINED AS AEROSPACE (AERONAUTICAL AND  
L, CONSTRUCTION, ENVIRONMENTAL, SANITARY, TRANSPORTATION), ELECTRICAL  
GENERAL (ENGINEERING MECHANICS, ENGINEERING GENERAL, ENGINEERING PHYSICS,  
Y, INDUSTRIAL, MATERIALS), MECHANICAL (MARINE, MECHANICAL), METALLURGICAL  
CAL, GEOPHYSICAL, MINERAL, MINING, PETROLEUM), OTHER (AGRICULTURAL,  
E, NUCLEAR, TEXTILE, OTHER ENGINEERING, BUSINESS ADMINISTRATION, CHEMISTRY,

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NUMBER OF ENGINEERS MEETING CRITERIA BY CURRICULA AND TYPES OF

CURRICULA	TOTAL	PRIVATE INDUSTRY OR BUSINESS	SELF- EM- PLOYED	COLLEGE OR UNIV.	JR.COL. OR TECH. INST.	SEC., ELFM., OTHER SCHOOL	NON- PROFIT ORG., OTHER THAN A SCHOOL
ALL CURRICULA - - - - -	308,000	211,100	11,400	20,200	900	300	5,400
AERONAUTICAL, ASTRONAUTICAL	13,100	8,400	300	1,000	-----	-----	500
AGRICULTURAL - - - - -	4,700	2,000	200	900	-----	-----	100
ARCHITECTURAL - - - - -	1,300	800	200	100	-----	-----	-----
BIOENGINEERING - - - - -	400	200	-----	100	-----	-----	-----
CERAMIC - - - - -	500	300	-----	100	-----	-----	-----
CHEMICAL - - - - -	26,600	21,400	400	1,800	100	-----	300
CIVIL - - - - -	43,600	19,600	2,900	2,900	100	-----	600
COMMUNICATIONS - - - - -	1,600	1,200	-----	100	-----	-----	100
CONSTRUCTION - - - - -	600	400	100	-----	-----	-----	-----
ELECTRICAL - - - - -	47,200	36,000	1,200	1,900	100	-----	700
ELECTRONIC - - - - -	16,800	13,600	200	500	-----	-----	400
ENGINEERING MECHANICS - - - - -	4,700	2,800	100	1,000	-----	-----	100
ENGINEERING GENERAL - - - - -	4,900	3,600	200	200	-----	-----	100
ENGINEERING PHYSICS - - - - -	1,700	1,200	-----	100	-----	-----	100
ENGINEERING SCIENCE - - - - -	2,100	1,300	100	300	-----	-----	100
ENGINEERING TECHNOLOGY - - - - -	800	600	-----	-----	-----	-----	-----
ENVIRONMENTAL - - - - -	600	300	-----	100	-----	-----	-----
GEOLOGICAL - - - - -	4,200	2,600	300	300	-----	-----	-----
GEOPHYSICAL - - - - -	300	200	-----	100	-----	-----	-----
INDUSTRIAL - - - - -	11,300	8,500	300	800	-----	-----	200
MARINE - - - - -	1,300	1,000	-----	-----	-----	-----	-----
MATERIALS - - - - -	900	400	-----	300	-----	-----	-----
MECHANICAL - - - - -	57,200	42,900	2,200	3,600	200	-----	800
METALLURGICAL - - - - -	12,800	9,200	200	1,200	-----	-----	400
MINERAL - - - - -	400	300	-----	100	-----	-----	-----
MINING - - - - -	4,200	2,600	300	200	-----	-----	-----
NAVAL ARCHITECTURE - - - - -	1,300	700	100	100	-----	-----	-----
NUCLEAR - - - - -	700	400	-----	100	-----	-----	-----
PETROLEUM - - - - -	6,400	5,300	300	100	-----	-----	-----
SANITARY - - - - -	1,900	700	100	300	-----	-----	-----
TEXTILE - - - - -	200	200	-----	-----	-----	-----	-----
TRANSPORTATION - - - - -	600	200	-----	100	-----	-----	-----
WELDING - - - - -	100	100	-----	-----	-----	-----	-----
OTHER ENGINEERING - - - - -	6,400	4,200	200	500	-----	-----	200
BUSINESS ADMINISTRATION - - - - -	7,300	6,100	100	200	-----	-----	100
CHEMISTRY - - - - -	1,700	1,200	-----	100	-----	-----	-----
PHYSICS - - - - -	4,100	2,900	100	300	-----	-----	200
OTHER NONENGINEERING - - - - -	7,000	4,000	300	800	200	100	200
NO REPORT - - - - -	6,800	3,800	700	100	-----	-----	-----

TE - GROUPS MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.

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TYPES OF EMPLOYER												
PRIVATE INDUSTRY OR BUSINESS	SELF- EMPLOYED	COLLEGE OR UNIV.	JR.COL. OR TECH. INST.	SEC., ELEM., OTHER SCHOOL	NON- PROFIT ORG., OTHER THAN A SCHOOL	FEDERAL GOVT. CIVILIAN EMPLOYEE	USPHS, MILI- TARY SERVICE	STATE GOVT.	LOCAL GOVT.	OTHER	NO REPORT	
211,100	11,400	20,200	900	300	5,400	24,600	4,900	5,900	4,800	4,600	14,000	
8,400	300	1,000	-----	-----	500	1,600	700	-----	-----	200	400	
2,000	200	900	-----	-----	100	1,100	100	100	-----	-----	200	
800	200	100	-----	-----	-----	100	-----	-----	-----	-----	100	
200	-----	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	
300	-----	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	
21,400	400	1,800	100	-----	300	900	100	100	100	300	1,100	
19,600	2,900	2,900	100	-----	600	5,800	1,000	4,000	2,800	1,000	2,700	
1,200	-----	100	-----	-----	100	200	-----	-----	-----	-----	-----	
400	100	-----	-----	-----	-----	-----	100	-----	-----	-----	-----	
36,000	1,200	1,900	100	-----	700	3,400	200	200	600	800	2,000	
13,600	300	500	-----	-----	400	1,400	200	-----	100	200	200	
2,800	100	1,000	-----	-----	100	400	100	-----	-----	100	200	
3,600	200	200	-----	-----	100	300	-----	-----	-----	100	300	
1,200	-----	100	-----	-----	100	200	-----	-----	-----	-----	100	
1,300	100	300	-----	-----	100	200	-----	-----	-----	-----	100	
600	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
300	-----	100	-----	-----	-----	-----	100	-----	-----	-----	-----	
2,600	300	300	-----	-----	-----	300	-----	100	-----	-----	300	
200	-----	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	
8,500	300	800	-----	-----	200	800	300	100	-----	100	200	
1,000	-----	-----	-----	-----	-----	100	100	-----	-----	-----	100	
400	-----	300	-----	-----	-----	-----	-----	-----	-----	-----	100	
42,900	2,200	3,600	200	-----	800	3,500	700	300	300	700	2,200	
9,200	200	1,200	-----	-----	400	600	100	-----	-----	100	700	
300	-----	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	
2,600	300	200	-----	-----	-----	400	-----	100	-----	-----	500	
700	100	100	-----	-----	-----	100	200	-----	-----	-----	100	
400	-----	100	-----	-----	-----	-----	100	-----	-----	-----	-----	
5,300	300	100	-----	-----	-----	200	100	-----	-----	100	200	
700	100	300	-----	-----	-----	200	100	200	100	100	100	
200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
200	-----	100	-----	-----	-----	-----	-----	100	100	-----	-----	
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
4,200	200	500	-----	-----	200	600	200	100	100	100	200	
6,100	100	200	-----	-----	100	300	200	-----	-----	100	200	
1,200	-----	100	-----	-----	-----	100	-----	-----	-----	-----	100	
2,900	100	300	-----	-----	200	500	-----	-----	-----	100	100	
4,000	300	800	200	100	200	600	200	100	200	200	200	
3,800	700	100	-----	-----	-----	400	-----	300	200	200	1,100	



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NUMBER OF ENGINEERS MEETING CRITERIA BY CURRICULA AND LEVELS

CURRICULA	TOTAL	DOCTORATE	PROFES- SIONAL MEDICAL	PROFES- SIONAL ENGINEER	HIGHER MASTER'S
ALL CURRICULA - - - - -	308,000	24,500	100	13,200	71,100
AERONAUTICAL, ASTRONAUTICAL - - - - -	13,100	1,300	-----	400	4,000
AGRICULTURAL - - - - -	4,700	400	-----	-----	1,300
ARCHITECTURAL - - - - -	1,300	-----	-----	-----	200
BIOENGINEERING - - - - -	400	100	-----	-----	100
CERAMIC - - - - -	500	100	-----	-----	100
CHEMICAL - - - - -	26,600	4,200	-----	700	5,700
CIVIL - - - - -	43,600	2,100	-----	2,100	7,900
COMMUNICATIONS - - - - -	1,600	100	-----	100	500
CONSTRUCTION - - - - -	600	-----	-----	100	200
ELECTRICAL - - - - -	47,200	2,000	-----	2,400	6,800
ELECTRONIC - - - - -	16,800	700	-----	400	5,300
ENGINEERING MECHANICS - - - - -	4,700	1,500	-----	100	1,600
ENGINEERING GENERAL - - - - -	4,900	200	-----	500	600
ENGINEERING PHYSICS - - - - -	1,700	300	-----	-----	300
ENGINEERING SCIENCE - - - - -	2,100	400	-----	-----	800
ENGINEERING TECHNOLOGY - - - - -	800	-----	-----	100	100
ENVIRONMENTAL - - - - -	600	100	-----	-----	200
GEOLOGICAL - - - - -	4,200	600	-----	200	900
GEOPHYSICAL - - - - -	300	100	-----	-----	100
INDUSTRIAL - - - - -	11,300	500	-----	300	2,600
MARINE - - - - -	1,300	-----	-----	-----	100
MATERIALS - - - - -	900	400	-----	-----	300
MECHANICAL - - - - -	57,200	2,700	-----	2,800	9,500
METALLURGICAL - - - - -	12,800	2,500	-----	700	3,200
MINERAL - - - - -	400	-----	-----	-----	200
MINING - - - - -	4,200	100	-----	900	400
NAVAL ARCHITECTURE - - - - -	1,300	-----	-----	100	500
NUCLEAR - - - - -	700	200	-----	-----	500
PETROLEUM - - - - -	6,400	200	-----	400	900
SANITARY - - - - -	1,900	300	-----	100	1,400
TEXTILE - - - - -	200	-----	-----	-----	-----
TRANSPORTATION - - - - -	600	100	-----	100	300
WELDING - - - - -	100	-----	-----	-----	-----
OTHER ENGINEERING - - - - -	6,400	600	-----	300	2,800
BUSINESS ADMINISTRATION - - - - -	7,300	100	-----	-----	6,300
CHEMISTRY - - - - -	1,700	500	-----	-----	300
PHYSICS - - - - -	4,100	600	-----	-----	1,200
OTHER NONENGINEERING - - - - -	7,000	1,200	100	-----	3,400
NO REPORT - - - - -	6,800	-----	-----	200	200

NOTE - GROUPS MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.

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 F ENGINEERS MEETING CRITERIA BY CURRICULA AND LEVELS OF HIGHEST DEGREE

TOTAL	HIGHEST DEGREE							
	DOCTORATE	PROFES- SIONAL MEDICAL	PROFES- SIONAL ENGINEER	MASTER'S	BACHELOR'S	LESS THAN BACHELOR'S DEGREE	OTHER	NO REPORT OF DEGREE
308,000	24,500	100	13,200	71,100	185,300	9,400	400	4,000
13,100	1,300	-----	400	4,000	7,100	300	-----	-----
4,700	400	-----	-----	1,300	2,900	-----	-----	-----
1,300	-----	-----	-----	200	1,000	100	-----	-----
400	100	-----	-----	100	200	-----	-----	-----
500	100	-----	-----	100	300	-----	-----	-----
26,600	4,200	-----	700	5,700	15,700	200	-----	-----
43,600	2,100	-----	2,100	7,900	31,000	300	100	-----
1,600	100	-----	100	500	800	100	-----	-----
600	-----	-----	100	200	300	100	-----	-----
47,200	2,000	-----	2,400	6,800	34,600	1,300	100	-----
16,800	700	-----	400	5,300	9,400	900	-----	-----
4,700	1,500	-----	100	1,600	1,300	200	-----	-----
4,900	200	-----	500	600	2,900	700	-----	-----
1,700	300	-----	-----	300	900	100	-----	-----
2,100	400	-----	-----	800	700	-----	-----	-----
800	-----	-----	100	100	400	100	-----	-----
600	100	-----	-----	200	200	-----	-----	-----
4,200	600	-----	200	900	2,400	-----	-----	-----
300	100	-----	-----	100	100	-----	-----	-----
11,300	500	-----	300	2,600	7,400	500	-----	-----
1,300	-----	-----	-----	100	1,100	100	-----	-----
900	400	-----	-----	300	100	-----	-----	-----
57,200	2,700	-----	2,800	9,500	40,900	1,200	100	-----
12,800	2,500	-----	700	3,200	6,100	200	-----	-----
400	-----	-----	-----	200	200	-----	-----	-----
4,200	100	-----	900	400	2,700	100	-----	-----
1,300	-----	-----	100	500	600	100	-----	-----
700	200	-----	-----	500	100	-----	-----	-----
6,400	200	-----	400	900	4,800	100	-----	-----
1,900	300	-----	100	1,400	200	-----	-----	-----
200	-----	-----	-----	-----	200	-----	-----	-----
600	100	-----	100	300	100	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----
6,400	600	-----	300	2,800	2,400	400	-----	-----
7,300	100	-----	-----	6,300	600	200	-----	-----
1,700	500	-----	-----	300	800	-----	-----	-----
4,100	600	-----	-----	1,200	2,200	100	-----	-----
7,000	1,200	100	-----	3,400	2,200	200	-----	-----
6,800	-----	-----	200	200	400	1,900	-----	4,000

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NUMBER OF ENGINEERS MEETING CRITERIA BY C

CURRICULA	TOTAL	BIOMEDICAL	BEHAVIORAL AND SOCIAL	CHEM AN MATER
ALL CURRICULA - - - - -	308,000	1,600	4,100	11,7
AERONAUTICAL, ASTRONAUTICAL	13,100	100	100	
AGRICULTURAL - - - - -	4,700	200	100	
ARCHITECTURAL - - - - -	1,300	-----	-----	-----
BIOENGINEERING - - - - -	400	100	-----	-----
CERAMIC - - - - -	500	-----	-----	-----
CHEMICAL - - - - -	26,600	300	700	4,7
CIVIL - - - - -	43,600	100	400	5
COMMUNICATIONS - - - - -	1,600	-----	-----	-----
CONSTRUCTION - - - - -	600	-----	-----	-----
ELECTRICAL - - - - -	47,200	200	400	4
ELECTRONIC - - - - -	16,800	100	100	
ENGINEERING MECHANICS - - - - -	4,700	-----	-----	-----
ENGINEERING GENERAL - - - - -	4,900	-----	100	2
ENGINEERING PHYSICS - - - - -	1,700	-----	-----	-----
ENGINEERING SCIENCE - - - - -	2,100	-----	-----	-----
ENGINEERING TECHNOLOGY - - - - -	800	-----	-----	-----
ENVIRONMENTAL - - - - -	600	-----	-----	-----
GEOLOGICAL - - - - -	4,200	-----	100	5
GEOPHYSICAL - - - - -	300	-----	-----	-----
INDUSTRIAL - - - - -	11,300	-----	100	3
MARINE - - - - -	1,300	-----	-----	-----
MATERIALS - - - - -	900	-----	-----	-----
MECHANICAL - - - - -	57,200	200	400	1,7
METALLURGICAL - - - - -	12,800	-----	100	1,7
MINERAL - - - - -	400	-----	-----	-----
MINING - - - - -	4,200	-----	100	-----
NAVAL ARCHITECTURE - - - - -	1,300	-----	-----	-----
NUCLEAR - - - - -	700	-----	-----	-----
PETROLEUM - - - - -	6,400	-----	300	-----
SANITARY - - - - -	1,900	-----	-----	-----
TEXTILE - - - - -	200	-----	-----	-----
TRANSPORTATION - - - - -	600	-----	-----	-----
WELDING - - - - -	100	-----	-----	-----
OTHER ENGINEERING - - - - -	6,400	-----	100	-----
BUSINESS ADMINISTRATION - - - - -	7,300	-----	300	-----
CHEMISTRY - - - - -	1,700	-----	-----	-----
PHYSICS - - - - -	4,100	-----	-----	-----
OTHER NONENGINEERING - - - - -	7,000	100	400	-----
NO REPORT - - - - -	6,800	-----	-----	-----

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## NUMBER OF ENGINEERS MEETING CRITERIA BY CURRICULA AND AREAS OF TECHNOLOGY

		AREAS OF TECHNOLOGY							
TOTAL		BIOMEDICAL	BEHAVIORAL AND SOCIAL	CHEMICAL AND MATERIALS	METALLUR- GICAL	EARTH, ATMOSPHERIC AND MARINE	ENVIRON- MENTAL AND STRUCTURAL	ELECTRO- MAGNETIC	DYNAMICS AND MECHANICS
- - -	308,000	1,600	4,100	11,700	12,100	9,900	33,700	42,800	40,100
TICAL	13,100	100	100	300	100	100	1,100	400	5,000
- - -	4,700	200	100	100	-----	200	1,100	300	600
- - -	1,300	-----	-----	-----	-----	-----	500	-----	100
- - -	400	100	-----	-----	-----	-----	-----	-----	-----
- - -	500	-----	-----	100	100	-----	-----	-----	-----
- - -	26,600	300	700	4,700	1,000	200	1,000	300	1,500
- - -	43,600	100	400	500	200	1,400	18,200	500	2,100
- - -	1,600	-----	-----	-----	-----	-----	-----	900	-----
- - -	600	-----	-----	-----	-----	-----	200	-----	-----
- - -	47,200	200	400	400	200	300	700	23,600	1,400
- - -	16,800	100	100	100	-----	100	100	7,800	200
- - -	4,700	-----	-----	100	-----	-----	500	100	2,000
- - -	4,900	-----	100	200	100	100	400	400	800
- - -	1,700	-----	-----	-----	-----	-----	100	300	100
- - -	2,100	-----	-----	-----	100	-----	100	300	300
- - -	800	-----	-----	-----	-----	-----	100	100	100
- - -	600	-----	-----	-----	-----	-----	300	-----	-----
- - -	4,200	-----	100	100	100	2,400	200	-----	100
- - -	300	-----	-----	-----	-----	200	-----	-----	-----
- - -	11,300	-----	100	100	200	100	300	400	500
- - -	1,300	-----	-----	-----	-----	200	100	100	300
- - -	900	-----	-----	300	300	-----	-----	-----	-----
- - -	57,200	200	400	1,500	600	600	3,400	2,400	20,600
- - -	12,800	-----	100	1,600	7,800	100	-----	100	200
- - -	400	-----	-----	-----	200	100	-----	-----	-----
- - -	4,200	-----	100	-----	300	1,900	200	-----	100
- - -	1,300	-----	-----	-----	-----	400	100	-----	100
- - -	700	-----	-----	-----	-----	-----	-----	-----	100
- - -	6,400	-----	300	100	-----	600	100	-----	300
- - -	1,900	-----	-----	-----	-----	-----	1,500	-----	-----
- - -	200	-----	-----	-----	-----	-----	-----	-----	-----
- - -	600	-----	-----	-----	-----	-----	400	-----	-----
- - -	100	-----	-----	-----	-----	-----	-----	-----	-----
- - -	6,400	-----	100	200	100	300	800	500	600
N - -	7,300	-----	300	400	200	100	300	700	600
- - -	1,700	-----	-----	300	100	-----	100	100	200
- - -	4,100	-----	-----	-----	100	100	100	1,000	300
- - -	7,000	100	400	200	200	200	600	900	600
- - -	6,800	-----	-----	200	100	100	900	1,200	800

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1  
NUMBER OF ENGINEERS MEETING CRITERIA BY CURRICULA AND AREAS OF TECHNOLOGY

CURRICULA	AREAS OF TECHNOLOGY					
	HEAT, LIGHT AND APPLIED PHYSICS	NUCLEAR	ENGINEERING PROCESSES AND APPLICATIONS	AUTOMATION AND CONTROL	WORK MANAGE- MENT AND EVALUATION	INFORM AN MATHEM
ALL CURRICULA - - - - -	8,500	2,600	32,100	12,400	56,500	11,
AERONAUTICAL, ASTRONAUTICAL	400	100	1,000	500	2,300	
AGRICULTURAL - - - - -	100	-----	700	100	700	
ARCHITECTURAL - - - - -	-----	-----	200	-----	200	
BIOENGINEERING - - - - -	-----	-----	-----	-----	100	-----
CERAMIC - - - - -	-----	-----	100	-----	-----	-----
CHEMICAL - - - - -	1,000	400	5,600	900	5,400	
CIVIL - - - - -	100	100	8,600	400	4,700	1,2
COMMUNICATIONS - - - - -	100	-----	-----	100	300	
CONSTRUCTION - - - - -	-----	-----	100	-----	200	-----
ELECTRICAL - - - - -	900	200	2,000	3,600	7,400	2,3
ELECTRONIC - - - - -	500	100	800	1,500	3,100	1,2
ENGINEERING MECHANICS - - - - -	200	-----	300	100	600	
ENGINEERING GENERAL - - - - -	100	-----	500	400	1,100	
ENGINEERING PHYSICS - - - - -	200	-----	200	100	200	1
ENGINEERING SCIENCE - - - - -	100	-----	100	100	400	1
ENGINEERING TECHNOLOGY - - - - -	-----	-----	100	-----	200	1
ENVIRONMENTAL - - - - -	-----	-----	-----	-----	-----	-----
GEOLOGICAL - - - - -	-----	-----	400	-----	300	-----
GEOPHYSICAL - - - - -	-----	-----	-----	-----	-----	-----
INDUSTRIAL - - - - -	100	-----	500	300	7,200	6
MARINE - - - - -	-----	100	100	-----	200	-----
MATERIALS - - - - -	-----	-----	-----	-----	-----	-----
MECHANICAL - - - - -	3,000	800	4,100	2,400	11,100	1,5
METALLURGICAL - - - - -	200	100	500	100	800	-----
MINERAL - - - - -	-----	-----	-----	-----	-----	-----
MINING - - - - -	-----	-----	400	-----	400	-----
NAVAL ARCHITECTURE - - - - -	-----	-----	200	-----	200	1
NUCLEAR - - - - -	-----	300	-----	-----	100	-----
PETROLEUM - - - - -	-----	-----	2,300	100	1,500	2
SANITARY - - - - -	-----	-----	100	-----	100	-----
TEXTILE - - - - -	-----	-----	-----	-----	100	-----
TRANSPORTATION - - - - -	-----	-----	-----	-----	-----	-----
WELDING - - - - -	-----	-----	-----	-----	-----	-----
OTHER ENGINEERING - - - - -	100	-----	700	400	1,600	4
BUSINESS ADMINISTRATION - - - - -	100	-----	600	200	2,400	4
CHEMISTRY - - - - -	100	-----	100	100	300	-----
PHYSICS - - - - -	500	100	200	400	700	2
OTHER NONENGINEERING - - - - -	100	-----	600	300	1,700	5
NO REPORT - - - - -	100	-----	800	200	900	1

- GROUPS MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.

REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969  
 LISTING CRITERIA BY CURRICULA AND AREAS OF TECHNOLOGY--CONTINUED

	AREAS OF TECHNOLOGY					NO REPORT
	ENGINEERING PROCESSES AND APPLICATIONS	AUTOMATION AND CONTROL	WORK MANAGE- MENT AND EVALUATION	INFORMATION AND MATHEMATICS	OTHER	
	32,100	12,400	56,500	11,500	9,700	18,700
						600
	1,000	500	2,300	500	500	300
	700	100	700	100	300	100
	200	-----	200	100	-----	-----
	-----	-----	100	-----	-----	-----
	100	-----	-----	800	1,200	1,600
	5,600	900	5,400	-----	-----	3,500
	8,600	400	4,700	1,200	1,400	100
	-----	100	300	100	-----	-----
	100	-----	200	-----	-----	2,700
	2,000	3,600	7,400	2,300	900	400
	800	1,500	3,100	1,500	300	200
	300	100	600	300	200	400
	500	400	1,100	200	-----	100
	200	100	200	100	100	100
	100	100	400	100	-----	-----
	100	-----	200	100	-----	-----
	-----	-----	300	-----	100	400
	400	-----	-----	-----	300	400
	-----	300	7,200	600	-----	100
	500	-----	200	-----	-----	100
	100	-----	-----	-----	-----	3,000
	4,100	2,400	11,100	1,500	1,600	900
	500	100	800	-----	200	-----
	-----	-----	400	-----	100	600
	400	-----	200	100	100	100
	200	-----	100	-----	-----	300
	-----	100	1,500	200	600	100
	2,300	-----	100	-----	-----	-----
	100	-----	100	-----	-----	-----
	-----	-----	100	-----	-----	300
	700	400	1,600	400	300	300
	600	200	2,400	-----	500	300
	100	100	300	-----	-----	100
	200	400	700	200	100	200
	600	300	1,700	500	500	300
	800	200	900	100	100	1,100

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY CURRICULA AND PRODUCT

CURRICULA	TOTAL	PRODUCTS			
		AGRICUL- TURE & FOOD	AIRCRAFT & SPACE	CERAMICS	CHEMI & ALL PRODU
ALL CURRICULA - - - - -	308,000	4,000	33,000	2,100	19,5
AERONAUTICAL, ASTRONAUTICAL - - - - -	13,100	100	8,500	-----	1
AGRICULTURAL - - - - -	4,700	1,400	100	-----	1
ARCHITECTURAL - - - - -	1,300	-----	100	-----	-----
BIOENGINEERING - - - - -	400	-----	-----	-----	-----
CERAMIC - - - - -	500	-----	-----	200	-----
CHEMICAL - - - - -	26,600	600	1,100	200	11,6
CIVIL - - - - -	43,600	300	1,100	300	4
COMMUNICATIONS - - - - -	1,600	-----	100	-----	-----
CONSTRUCTION - - - - -	600	-----	-----	-----	-----
ELECTRICAL - - - - -	47,200	200	3,000	100	7
ELECTRONIC - - - - -	16,800	-----	2,100	-----	1
ENGINEERING MECHANICS - - - - -	4,700	-----	1,100	-----	1
ENGINEERING GENERAL - - - - -	4,500	100	700	-----	2
ENGINEERING PHYSICS - - - - -	1,700	-----	300	-----	-----
ENGINEERING SCIENCE - - - - -	2,100	-----	400	-----	1
ENGINEERING TECHNOLOGY - - - - -	800	-----	100	-----	1
ENVIRONMENTAL - - - - -	600	-----	-----	-----	-----
GEOLOGICAL - - - - -	4,200	-----	100	-----	1
GEOPHYSICAL - - - - -	300	-----	100	-----	-----
INDUSTRIAL - - - - -	11,300	300	1,000	200	7
MARINE - - - - -	1,300	-----	100	-----	-----
MATERIALS - - - - -	900	-----	100	-----	-----
MECHANICAL - - - - -	57,200	600	8,200	400	2,6
METALLURGICAL - - - - -	12,800	-----	900	200	3
MINERAL - - - - -	400	-----	-----	-----	-----
MINING - - - - -	4,200	-----	-----	-----	1
NAVAL ARCHITECTURE - - - - -	1,300	-----	-----	-----	-----
NUCLEAR - - - - -	700	-----	100	-----	-----
PETROLEUM - - - - -	6,400	-----	-----	-----	1
SANITARY - - - - -	1,900	-----	-----	-----	-----
TEXTILE - - - - -	200	-----	-----	-----	-----
TRANSPORTATION - - - - -	600	-----	-----	-----	-----
WELDING - - - - -	100	-----	-----	-----	-----
OTHER ENGINEERING - - - - -	6,400	100	700	-----	3
BUSINESS ADMINISTRATION - - - - -	7,300	100	800	100	9
CHEMISTRY - - - - -	1,700	-----	200	-----	4
PHYSICS - - - - -	4,100	-----	700	-----	1
OTHER NONENGINEERING - - - - -	7,000	100	800	-----	2
REPORT - - - - -	6,800	100	400	-----	1

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969  
OF ENGINEERS MEETING CRITERIA BY CURRICULA AND PRODUCTS OR SERVICES

PRODUCTS OR SERVICES								
TOTAL	AGRICUL- TURE & FOOD	AIRCRAFT & SPACE	CERAMICS	CHEMICALS & ALLIED PRODUCTS	COMMU- NICATIONS	COMPUTERS	CONSTRUC- TION & CIVIL ENGR	EDUCA- TIONAL, INFOR- MATICA SERVICES
308,000	4,000	33,000	2,100	19,500	7,700	11,000	45,900	14,600
13,100	100	8,500	-----	100	100	300	300	500
4,700	1,400	100	-----	100	-----	-----	800	300
1,300	-----	100	-----	-----	-----	-----	700	100
400	-----	-----	-----	-----	-----	-----	-----	100
500	-----	-----	200	-----	-----	-----	-----	-----
26,600	600	1,100	200	11,600	100	500	1,000	1,300
43,600	300	1,100	300	400	100	300	29,700	1,900
1,600	-----	100	-----	-----	700	100	-----	100
600	-----	-----	-----	-----	-----	-----	400	-----
47,200	200	3,000	100	700	3,000	3,000	1,300	1,500
16,800	-----	2,100	-----	100	1,500	2,400	100	300
4,700	-----	1,100	-----	100	100	100	300	800
4,500	100	700	-----	200	100	200	500	100
1,700	-----	300	-----	-----	100	100	100	100
2,100	-----	400	-----	100	100	100	100	200
800	-----	100	-----	100	-----	100	-----	-----
600	-----	-----	-----	-----	-----	-----	200	100
4,200	-----	100	-----	100	-----	-----	400	200
300	-----	100	-----	-----	-----	-----	-----	-----
11,300	300	1,000	200	700	300	700	400	800
1,300	-----	100	-----	-----	-----	-----	100	-----
900	-----	100	-----	-----	-----	-----	-----	100
57,200	600	8,200	400	2,600	400	1,100	3,500	2,900
12,800	-----	900	200	300	100	100	100	600
400	-----	-----	-----	-----	-----	-----	-----	-----
4,200	-----	-----	-----	100	-----	-----	300	100
1,300	-----	-----	-----	-----	-----	-----	-----	-----
700	-----	100	-----	-----	-----	-----	-----	100
6,400	-----	-----	-----	100	-----	100	100	100
1,900	-----	-----	-----	-----	-----	-----	1,000	200
200	-----	-----	-----	-----	-----	-----	-----	-----
600	-----	-----	-----	-----	-----	-----	300	100
100	-----	-----	-----	-----	-----	-----	-----	-----
6,400	100	700	-----	300	100	300	1,100	400
7,300	100	800	100	900	200	400	500	100
1,700	-----	200	-----	400	-----	-----	100	100
4,100	-----	700	-----	100	200	300	100	200
7,000	100	800	-----	200	300	300	800	1,000
6,800	100	400	-----	100	200	100	1,600	-----



NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
NUMBER OF ENGINEERS MEETING CRITERIA BY CURRICULA AND PRODUCTS OR

CURRICULA	PRODUCTS OR				
	ELEC- TRICAL EQUIP- MENT, SERVICES	ELEC- TRONIC EQUIP- MENT, SERVICES	LAB., SCI., PHOTO., OPTICAL EQUIPMENT	MACHINERY, MECHANICAL EQUIPMENT	MAR. TRAN PORTA
ALL CURRICULA - - - - -	19,200	23,000	2,800	28,400	4,8
AERONAUTICAL, ASTRONAUTICAL - - - - -	200	300	100	500	2
AGRICULTURAL - - - - -	100	-----	-----	1,200	-----
ARCHITECTURAL - - - - -	-----	-----	-----	100	-----
BIOENGINEERING - - - - -	-----	-----	-----	-----	-----
CERAMIC - - - - -	-----	-----	-----	-----	-----
CHEMICAL - - - - -	400	400	200	1,100	1
CIVIL - - - - -	300	100	100	800	3
COMMUNICATIONS - - - - -	100	300	-----	-----	-----
CONSTRUCTION - - - - -	-----	-----	-----	-----	-----
ELECTRICAL - - - - -	11,200	7,300	400	1,700	4
ELECTRONIC - - - - -	1,000	7,200	300	200	1
ENGINEERING MECHANICS - - - - -	100	200	100	700	1
ENGINEERING GENERAL - - - - -	300	300	100	700	1
ENGINEERING PHYSICS - - - - -	100	500	100	100	-----
ENGINEERING SCIENCE - - - - -	100	200	-----	100	-----
ENGINEERING TECHNOLOGY - - - - -	-----	100	-----	100	-----
ENVIRONMENTAL - - - - -	-----	-----	-----	200	-----
GEOLOGICAL - - - - -	-----	-----	-----	100	-----
GEOPHYSICAL - - - - -	-----	-----	-----	-----	-----
INDUSTRIAL - - - - -	600	500	100	1,100	1
MARINE - - - - -	-----	-----	-----	300	5
MATERIALS - - - - -	-----	100	-----	-----	-----
MECHANICAL - - - - -	2,400	1,800	700	15,400	1,1
METALLURGICAL - - - - -	200	300	100	600	1
MINERAL - - - - -	-----	-----	-----	-----	-----
MINING - - - - -	-----	-----	-----	300	-----
NAVAL ARCHITECTURE - - - - -	-----	-----	-----	-----	1,0
NUCLEAR - - - - -	-----	-----	-----	100	-----
PETROLEUM - - - - -	-----	-----	-----	100	-----
SANITARY - - - - -	-----	-----	-----	-----	-----
TEXTILE - - - - -	-----	-----	-----	-----	-----
TRANSPORTATION - - - - -	-----	-----	-----	-----	-----
WELDING - - - - -	-----	-----	-----	-----	-----
OTHER ENGINEERING - - - - -	300	500	100	700	1
BUSINESS ADMINISTRATION - - - - -	500	500	100	600	1
CHEMISTRY - - - - -	100	100	-----	100	-----
PHYSICS - - - - -	300	1,200	100	200	-----
WITH ENGINEERING - - - - -	200	500	100	400	1
TO ENGINEERING - - - - -	500	300	100	1,000	1

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969  
ENGINEERS MEETING CRITERIA BY CURRICULA AND PRODUCTS OR SERVICES--CONTINUED

## PRODUCTS OR SERVICES

ELEC- TRICAL EQUIP- MENT, SERVICES	ELEC- TRONIC EQUIP- MENT, SERVICES	LAB.,SCI., PHOTO., OPTICAL EQUIPMENT	MACHINERY, MECHANICAL EQUIPMENT	MARINE TRANS- PORTATION	MEDICAL, HEALTH SERVICES	METALS, BASIC (EXCEPT MINING)	METAL FABRICATED PRODUCTS	MINING
19,200	23,000	2,800	28,400	4,800	1,300	12,600	6,300	5,900
200	300	100	500	200	-----	200	100	-----
100	-----	-----	1,200	-----	-----	100	-----	-----
-----	-----	-----	100	-----	-----	-----	100	-----
-----	-----	-----	-----	-----	100	-----	-----	-----
400	400	200	1,100	100	100	1,200	300	200
300	100	100	800	300	-----	300	700	300
100	300	-----	-----	-----	-----	-----	-----	-----
11,200	7,300	400	1,700	400	100	500	300	200
1,000	7,200	300	200	100	100	-----	-----	-----
100	200	100	700	100	-----	-----	100	-----
300	300	100	700	100	-----	200	100	-----
100	500	100	100	-----	-----	-----	-----	-----
100	200	-----	100	-----	-----	100	-----	-----
-----	100	-----	100	-----	-----	-----	-----	-----
-----	-----	-----	200	-----	-----	-----	-----	-----
-----	-----	-----	100	-----	-----	100	-----	1,400
600	500	100	1,100	100	200	600	600	100
-----	-----	-----	300	500	-----	-----	-----	100
-----	100	-----	-----	-----	-----	300	-----	-----
2,400	1,800	700	15,400	1,100	200	1,200	2,100	200
200	300	100	600	100	-----	6,300	800	400
-----	-----	-----	300	-----	-----	100	-----	200
-----	-----	-----	-----	1,000	-----	200	-----	2,300
-----	-----	-----	100	-----	-----	-----	-----	-----
-----	-----	-----	100	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----
300	500	100	700	100	-----	200	100	100
500	500	100	600	100	-----	300	200	100
100	100	-----	100	-----	-----	100	-----	-----
300	1,200	100	200	-----	-----	100	-----	-----
200	500	100	400	100	100	200	100	-----
500	300	100	1,000	100	-----	100	200	100

NATIONAL REGISTER OF SCIENTIFIC AND  
NUMBER OF ENGINEERS MEETING CRITERIA BY CURRICULA

CURRICULA	MOTOR VEHICLE TRANS- PORTATION	ORDNANCE	PETROL
ALL CURRICULA - - - - -	2,500	5,200	15,5
AERONAUTICAL, ASTRONAUTICAL - - - - -	100	500	2
AGRICULTURAL - - - - -	-----	-----	1
ARCHITECTURAL - - - - -	-----	-----	-----
BIOENGINEERING - - - - -	-----	-----	-----
CERAMIC - - - - -	-----	-----	-----
CHEMICAL - - - - -	100	300	2,9
CIVIL - - - - -	200	200	8
COMMUNICATIONS - - - - -	-----	-----	-----
CONSTRUCTION - - - - -	-----	-----	-----
ELECTRICAL - - - - -	200	800	6
ELECTRONIC - - - - -	-----	500	1
ENGINEERING MECHANICS - - - - -	100	100	1
ENGINEERING GENERAL - - - - -	100	100	2
ENGINEERING PHYSICS - - - - -	-----	-----	1
ENGINEERING SCIENCE - - - - -	-----	100	-----
ENGINEERING TECHNOLOGY - - - - -	-----	-----	-----
ENVIRONMENTAL - - - - -	-----	-----	-----
GEOLOGICAL - - - - -	-----	-----	1,1
GEOPHYSICAL - - - - -	-----	-----	-----
INDUSTRIAL - - - - -	300	200	2
MARINE - - - - -	-----	-----	-----
MATERIALS - - - - -	-----	-----	-----
MECHANICAL - - - - -	900	1,500	2,2
METALLURGICAL - - - - -	200	100	1
MINERAL - - - - -	-----	-----	-----
MINING - - - - -	-----	-----	-----
NAVAL ARCHITECTURE - - - - -	-----	-----	-----
NUCLEAR - - - - -	-----	-----	-----
PETROLEUM - - - - -	-----	-----	5,4
SANITARY - - - - -	-----	-----	-----
TEXTILE - - - - -	-----	-----	-----
TRANSPORTATION - - - - -	-----	-----	-----
WELDING - - - - -	-----	-----	-----
OTHER ENGINEERING - - - - -	100	100	2
BUSINESS ADMINISTRATION - - - - -	100	200	-----
CHEMISTRY - - - - -	-----	-----	-----
PHYSICS - - - - -	-----	200	-----
OTHER NONENGINEERING - - - - -	-----	100	-----
NO REPORT - - - - -	-----	100	-----

NOTE - GROUPS MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.

# NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

NUMBER OF ENGINEERS MEETING CRITERIA BY CURRICULA AND PRODUCTS OR SERVICES--CONTINUED

## PRODUCTS OR SERVICES

CURRICULA	MOTOR VEHICLE TRANS- PORTATION	ORDNANCE	PETROLEUM	RAILWAY, RAPID TRANSIT	UTILITIES	OTHER PRODUCTS, SERVICES	NO REPORT OF PRODUCTS OR SERVICES
	2,500	5,200	15,500	1,500	14,700	11,300	15,200
NAUTICAL	100	500	200	-----	100	300	500
	-----	-----	100	-----	200	100	300
	-----	-----	-----	-----	-----	-----	100
	-----	-----	-----	-----	-----	-----	-----
	100	300	2,900	-----	400	1,200	1,200
	200	200	800	300	1,300	800	2,900
	-----	-----	-----	-----	-----	-----	100
	-----	-----	-----	-----	-----	-----	-----
	200	800	600	200	6,900	1,100	2,200
	-----	500	100	-----	200	300	300
S	100	100	100	-----	100	200	200
	100	100	200	-----	200	300	300
	-----	-----	100	-----	-----	-----	100
	-----	100	-----	-----	-----	100	100
OGY	-----	-----	-----	-----	-----	-----	-----
	-----	-----	1,100	-----	100	100	300
	-----	-----	-----	-----	-----	-----	-----
	300	200	200	100	200	1,500	300
	-----	-----	-----	-----	100	-----	100
	-----	-----	-----	-----	-----	-----	100
	900	1,500	2,200	400	3,000	2,200	2,300
	200	100	100	-----	100	200	800
	-----	-----	-----	-----	-----	-----	-----
	-----	-----	200	-----	-----	100	500
	-----	-----	-----	-----	-----	-----	100
	-----	-----	-----	-----	-----	100	-----
	-----	-----	5,400	-----	100	100	200
	-----	-----	-----	-----	300	100	100
	-----	-----	-----	-----	-----	100	-----
	-----	-----	-----	-----	-----	-----	-----
	100	100	200	-----	200	400	300
TION	100	200	300	-----	300	700	200
	-----	-----	200	-----	-----	100	100
	-----	200	100	-----	100	100	100
	-----	100	200	-----	300	700	300
	-----	100	200	100	400	200	1,100

TOTAL BECAUSE OF ROUNDING.

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1966  
DISTRIBUTION OF AGE AT TIME OF RECEIVING DEGREE, BY LEVEL OF DEGREE, FOR ENGINEERS

LEVEL OF DEGREE

AGE AT TIME OF RECEIVING DEGREE	TOTAL REPORTING B.S.	TOTAL REPORTING BIRTH YEAR & YEAR OF DEGREE	B.S. HIGHEST DEGREE, AGE AT B.S.	M.S. HIGHEST DEGREE, AGE AT B.S.	M.S. HIGHEST DEGREE, AGE AT M.S.
ALL AGES - - - - -	274,900	270,100	182,200	66,200	66,200
15 - - - - -	---	---	---	---	---
16 - - - - -	---	---	---	---	---
17 - - - - -	100	100	---	---	---
18 - - - - -	200	200	100	---	---
19 - - - - -	800	800	400	200	---
20 - - - - -	5,100	5,100	2,600	1,500	100
21 - - - - -	25,500	25,500	13,400	8,400	300
22 - - - - -	66,800	66,800	39,500	19,700	1,800
23 - - - - -	54,100	54,100	36,300	13,500	5,100
24 - - - - -	30,200	30,200	21,600	6,800	7,000
25 - - - - -	21,300	21,300	16,100	4,300	6,500
26 - - - - -	16,500	16,500	12,500	3,200	6,000
27 - - - - -	12,600	12,600	9,700	2,300	5,600
28 - - - - -	10,000	10,000	7,900	1,900	5,100
29 - - - - -	7,000	7,000	5,700	1,200	4,400
30 - - - - -	4,800	4,800	4,000	700	3,800
31 - - - - -	3,200	3,200	2,600	600	3,400
32 - - - - -	2,500	2,500	2,100	300	2,800
33 - - - - -	1,900	1,900	1,600	300	2,200
34 - - - - -	1,400	1,400	1,100	300	1,800
35 - - - - -	1,300	1,300	1,000	300	1,600
36 - - - - -	900	900	800	100	1,400
37 - - - - -	800	800	700	200	1,200
38 - - - - -	600	600	500	100	1,000
39 - - - - -	400	400	300	100	900
40 - - - - -	400	400	400	---	800
41 - - - - -	300	300	200	---	600
42 - - - - -	300	300	200	100	400
43 - - - - -	200	200	200	---	500
44 - - - - -	100	100	100	---	400
45 - - - - -	200	200	100	---	200
46 - - - - -	100	100	100	---	300
47 - - - - -	100	100	100	---	200
48 - - - - -	---	---	---	---	200
49 - - - - -	---	---	---	---	100
50 - - - - -	100	100	100	---	100
51 - - - - -	---	---	---	---	100
52 - - - - -	---	---	---	---	100
53 - - - - -	100	100	---	---	100
54 - - - - -	---	---	---	---	100
55 - - - - -	---	---	---	---	100
56 - - - - -	---	---	---	---	---



NATIONAL REGISTER OF SCIENTIFIC A  
DISTRIBUTION OF AGE AT TIME OF RECEIVING DEGREE, BY LEVEL

AGE AT TIME OF RECEIVING DEGREE	TOTAL REPORTING B.S.	TOTAL REPORTING BIRTH YEAR & YEAR OF DEGREE	B.S. HIGHEST DEGREE, AGE AT B.
ALL AGES, CONTINUED			
57 - - - - -	---	---	---
58 - - - - -	---	---	---
59 - - - - -	---	---	---
60 - - - - -	---	---	---
61 - - - - -	---	---	---
62 - - - - -	---	---	---
63 - - - - -	---	---	---
64 - - - - -	---	---	---
65 - - - - -	---	---	---
66 - - - - -	---	---	---
67 - - - - -	---	---	---
68 - - - - -	---	---	---
69 - - - - -	---	---	---
70 - - - - -	---	---	---
71 - - - - -	---	---	---
72 - - - - -	---	---	---
73 - - - - -	---	---	---
74 - - - - -	---	---	---
75 - - - - -	---	---	---
76 - - - - -	---	---	---
77 - - - - -	---	---	---
78 - - - - -	---	---	---
79 - - - - -	---	---	---
80 OR LATER - - - - -	---	---	---
NO REPORT - - - - -	4,800	---	---

## DISTRIBUTION OF AGE AT TIME OF RECEIVING DEGREE

LOWER DECILE - - - - -	21	22
LOWER QUARTILE - - - - -	22	22
MEDIAN - - - - -	23	23
UPPER QUARTILE - - - - -	25	26
UPPER DECILE - - - - -	28	29

NOTE - GROUPS MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.

## AGE AT TIME OF RECEIVING DEGREE, BY LEVEL OF DEGREE, FOR ENGINEERS MEETING CRITERIA--CONTINUED

TOTAL REPORTING B.S.	TOTAL REPORTING BIRTH YEAR & YEAR OF DEGREE	B.S. HIGHEST DEGREE, AGE AT B.S.	M.S. HIGHEST DEGREE, AGE AT B.S.	M.S. HIGHEST DEGREE, AGE AT M.S.	PH.D. HIGHEST DEGREE, AGE AT B.S.	PH.D. HIGHEST DEGREE, AGE AT PH.D.	NO REPORT OF BIRTH YEAR OR YEAR OF DEGREE
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F RECEIVING DEGREE

TOTAL BECAUSE OF ROUNDING.



NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1960  
DISTRIBUTION OF AGE AT TIME OF RECEIVING BACHELOR'S, MASTER'S, AND DOCTORATE DEGREE  
BY PRESENT AGE, FOR ENGINEERS MEETING CRITERIA

			PRESENT	
DISTRIBUTION OF AGE AT TIME OF RECEIVING BACHELOR'S DEGREE	TOTAL	TOTAL REPORTING BIRTH YEAR & YEAR OF DEGREE	LESS THAN 30	30-39
TOTAL - - - - -	274,900	270,400	35,000	82,300
TOTAL NOT REPORTING AGE AND YEAR OF DEGREE - - - - -	4,500	---	---	---
TOTAL REPORTING AGE AND YEAR OF DEGREE - - - - -	270,400	270,400	35,000	82,300
LOWER DECILE - - - - -		21	22	22
LOWER QUARTILE - - - - -		22	22	22
MEDIAN - - - - -		23	22	23
UPPER QUARTILE - - - - -		25	23	25
UPPER DECILE - - - - -		28	24	28
DISTRIBUTION OF AGE AT TIME OF RECEIVING MASTER'S DEGREE				
TOTAL - - - - -	90,500	89,000	11,200	32,100
TOTAL NOT REPORTING AGE AND YEAR OF DEGREE - - - - -	1,600	---	---	---
TOTAL REPORTING AGE AND YEAR OF DEGREE - - - - -	89,000	89,000	11,200	32,100
LOWER DECILE - - - - -		23	23	23
LOWER QUARTILE - - - - -		24	24	25
MEDIAN - - - - -		27	24	27
UPPER QUARTILE - - - - -		31	26	30
UPPER DECILE - - - - -		36	27	32
DISTRIBUTION OF AGE AT TIME OF RECEIVING DOCTORATE DEGREE				
TOTAL - - - - -	24,500	24,100	1,800	10,000
TOTAL NOT REPORTING AGE AND YEAR OF DEGREE - - - - -	300	---	---	---
TOTAL REPORTING AGE AND YEAR OF DEGREE - - - - -	24,100	24,100	1,800	10,000
LOWER DECILE - - - - -		26	25	26
LOWER QUARTILE - - - - -		27	26	27
MEDIAN - - - - -		30	27	29
UPPER QUARTILE - - - - -		33	28	32
UPPER DECILE - - - - -		38	28	34

NOTE: GROUPS MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.

REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969  
 TIME OF RECEIVING BACHELOR'S, MASTER'S, AND DOCTORATE DEGREES,  
 PRESENT AGE, FOR ENGINEERS MEETING CRITERIA

	PRESENT AGE				NO REPORT OF BIRTH YEAR OR YEAR OF DEGREE	
	TOTAL REPORTING BIRTH YEAR & YEAR OF DEGREE	LESS THAN 30	30-39	40-49	50 AND HIGHER	
00	270,400	35,000	82,300	90,000	63,000	4,500
00	---	---	---	---	---	4,500
00	270,400	35,000	82,300	90,000	63,000	---
	21	22	22	21	21	
	22	22	22	22	22	
	23	22	23	24	23	
	25	23	25	27	25	
	28	24	28	29	31	
00	89,000	11,200	32,100	28,400	17,300	1,600
00	---	---	---	---	---	1,600
00	89,000	11,200	32,100	28,400	17,300	---
	23	23	23	24	23	
	24	24	25	26	24	
	27	24	27	28	28	
	31	26	30	33	35	
	36	27	32	39	43	
500	24,100	1,800	10,000	7,200	5,200	300
300	---	---	---	---	---	300
100	24,100	1,800	10,000	7,200	5,200	---
	26	25	26	26	25	
	27	26	27	28	27	
	30	27	29	31	31	
	33	28	32	36	39	
	38	28	34	40	45	

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL  
CHARACTERISTICS OF ENGINEERS MEETING CRITERIA  
IN ENGINEERING AND AN ADVANCED DEGREE IN A

GENERAL CHARACTERISTICS	TOTAL	BUSINESS ADMINISTRATION	CH
TOTAL ENGINEERS REPORTING - - - - -	11,100	6,000	
HIGHEST DEGREE			
DOCTORATE - - - - -	1,600	100	
PROFESSIONAL MEDICAL - - - - -	100	-----	
PROFESSIONAL ENGINEER - - - - -	-----	-----	
MASTER'S - - - - -	9,400	5,900	
BACHELOR'S - - - - -	-----	-----	
LESS THAN BACHELOR'S - - - - -	-----	-----	
OTHER - - - - -	-----	-----	
NO REPORT - - - - -	-----	-----	
CURRICULUM OF BACHELOR'S DEGREE			
AEROSPACE - - - - -	300	200	
CHEMICAL - - - - -	1,800	1,000	
CIVIL - - - - -	1,400	600	
ELECTRICAL - - - - -	2,400	1,100	
GENERAL - - - - -	1,700	1,000	
MECHANICAL - - - - -	2,400	1,500	
METALLURGICAL - - - - -	300	200	
MINERAL - - - - -	300	200	
OTHER - - - - -	400	200	
NO REPORT - - - - -	-----	-----	
PROFESSIONAL IDENTIFICATION			
ENGINEER - - - - -	6,700	3,700	
ARCHITECT - - - - -	-----	-----	
PHYSICIST - - - - -	300	-----	
CHEMIST - - - - -	100	-----	
GEOLOGIST - - - - -	-----	-----	
MATHEMATICIAN - - - - -	100	-----	
METALLURGIST - - - - -	100	100	
TECHNICIAN - - - - -	-----	-----	
OTHER - - - - -	3,400	2,100	
NO REPORT - - - - -	300	200	

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

CHARACTERISTICS OF ENGINEERS MEETING CRITERIA WITH A BACHELOR'S DEGREE  
IN ENGINEERING AND AN ADVANCED DEGREE IN A NONENGINEERING FIELD

CHARACTERISTICS	TOTAL	NONENGINEERING FIELDS				
		BUSINESS ADMINISTRATION	CHEMISTRY	PHYSICS	MEDICINE	OTHER NON- ENGINEERING FIELDS
ALL ENGINEERS	11,100	6,000	400	900	100	3,700
BY DEGREE						
Bachelor's	1,600	100	300	300	-----	1,000
Master's	100	-----	-----	-----	100	-----
Doctoral	9,400	5,900	200	600	-----	2,700
By Field						
Business Administration	-----	-----	-----	-----	-----	-----
Chemistry	-----	-----	-----	-----	-----	-----
Physics	-----	-----	-----	-----	-----	-----
Medicine	-----	-----	-----	-----	-----	-----
Other Non-Engineering Fields	-----	-----	-----	-----	-----	-----
By Degree						
Bachelor's	300	200	-----	-----	-----	100
Master's	1,800	1,000	400	100	-----	400
Doctoral	1,400	600	-----	100	-----	700
By Field						
Business Administration	2,400	1,100	-----	400	-----	800
Chemistry	1,700	1,000	-----	200	-----	500
Physics	2,400	1,500	-----	100	-----	800
Medicine	300	200	-----	-----	-----	100
Other Non-Engineering Fields	300	200	-----	-----	-----	100
By Degree						
Bachelor's	400	200	-----	-----	-----	200
Master's	-----	-----	-----	-----	-----	-----
Doctoral	-----	-----	-----	-----	-----	-----
By Field						
Business Administration	6,700	3,700	300	500	-----	2,200
Chemistry	300	-----	-----	300	-----	-----
Physics	100	-----	100	-----	-----	-----
Medicine	100	-----	-----	-----	-----	100
Other Non-Engineering Fields	100	100	-----	-----	-----	-----
By Degree						
Bachelor's	3,400	2,100	-----	100	100	1,200
Master's	300	200	-----	-----	-----	100

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
CHARACTERISTICS OF ENGINEERS MEETING CRITERIA WITH A DEGREE  
IN ENGINEERING AND AN ADVANCED DEGREE IN A NONENGINEERING FIELD

GENERAL CHARACTERISTICS		TOTAL	BUSINESS ADMINISTRATION	CHEMISTRY
TYPE OF EMPLOYER				
PRIV. INDUSTRY, BUSINESS	- - - - -	7,800	5,000	300
SELF-EMPLOYED	- - - - -	300	100	-----
COLLEGE, UNIVERSITY	- - - - -	900	100	100
JR. COLLEGE, TECH. INST.	- - - - -	200	-----	-----
SEC., ELEM., OTHER SCHOOL	- - - - -	100	-----	-----
NONPROFIT ORGANIZATION	- - - - -	300	100	-----
FEDERAL GOVERNMENT	- - - - -	600	200	-----
USPHS, MILITARY SERVICE	- - - - -	300	200	-----
STATE GOVERNMENT	- - - - -	100	-----	-----
LOCAL GOVERNMENT	- - - - -	200	-----	-----
OTHER	- - - - -	200	100	-----
NO REPORT	- - - - -	300	100	-----
FUNCTIONS				
DESIGN	- - - - -	900	400	-----
DEVELOPMENT	- - - - -	900	500	100
RESEARCH	- - - - -	800	200	100
PRODUCTION	- - - - -	1,700	1,300	-----
CONTROL	- - - - -	5,100	3,200	100
TEACHING	- - - - -	800	100	-----
OTHER	- - - - -	400	200	-----
NO REPORT	- - - - -	400	200	-----

NOTE - GROUPS MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING. GROUPS OF CURRICULA ARE DEFINED AS: AERONAUTICAL, CIVIL (ARCHITECTURAL, CIVIL, CONSTRUCTION, ENVIRONMENTAL, SANITARY, COMMUNICATIONS, ELECTRICAL, ELECTRONIC), GENERAL (ENGINEERING MECHANICS, ENGINEERING SCIENCE, ENGINEERING TECHNOLOGY, INDUSTRIAL, MATERIALS), MECHANICAL (METALLURGICAL, WELDING), MINERAL (GEOLOGICAL, GEOPHYSICAL, MINERAL, MINING, PETROLEUM), BIOENGINEERING, CERAMIC, NAVAL ARCHITECTURE, NUCLEAR, TEXTILE, OTHER ENGINEERING, PHYSICS, OTHER NONENGINEERING).

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

CHARACTERISTICS OF ENGINEERS MEETING CRITERIA WITH A BACHELOR'S DEGREE  
IN ENGINEERING AND AN ADVANCED DEGREE IN A NONENGINEERING FIELD--CONTINUED

## NONENGINEERING FIELDS

	TOTAL	BUSINESS ADMINISTRATION	CHEMISTRY	PHYSICS	MEDICINE	OTHER NON- ENGINEERING FIELDS
- - - - -	7,800	5,000	300	500	-----	1,900
- - - - -	300	100	-----	-----	-----	200
- - - - -	900	100	100	100	-----	500
- - - - -	200	-----	-----	-----	-----	100
- - - - -	100	-----	-----	-----	-----	100
- - - - -	300	100	-----	-----	-----	100
- - - - -	600	200	-----	100	-----	300
- - - - -	300	200	-----	-----	-----	100
- - - - -	100	-----	-----	-----	-----	-----
- - - - -	200	-----	-----	-----	-----	100
- - - - -	200	100	-----	-----	-----	100
- - - - -	300	100	-----	-----	-----	100
- - - - -	900	400	-----	100	-----	300
- - - - -	900	500	100	100	-----	200
- - - - -	800	200	100	300	-----	200
- - - - -	1,700	1,300	-----	-----	-----	400
- - - - -	5,100	3,200	100	200	-----	1,600
- - - - -	800	100	-----	100	-----	600
- - - - -	400	200	-----	-----	-----	200
- - - - -	400	200	-----	100	-----	200

BECAUSE OF ROUNDING. GROUPS OF CURRICULA ARE DEFINED AS AEROSPACE (AERONAUTICAL AND ARCHITECTURAL, CIVIL, CONSTRUCTION, ENVIRONMENTAL, SANITARY, TRANSPORTATION), ELECTRICAL, ELECTRONIC), GENERAL (ENGINEERING MECHANICS, ENGINEERING GENERAL, ENGINEERING PHYSICS, ENGINEERING TECHNOLOGY, INDUSTRIAL, MATERIALS), MECHANICAL (MARINE, MECHANICAL), METALLURGICAL, MINERAL (GEOLOGICAL, GEOPHYSICAL, MINERAL, MINING, PETROLEUM), OTHER (AGRICULTURAL, NAVAL ARCHITECTURE, NUCLEAR, TEXTILE, OTHER ENGINEERING, BUSINESS ADMINISTRATION, CHEMISTRY, (ING)).

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## CHARACTERISTICS OF FOREIGN BORN ENGINEERS MEETING CRITERIA

GENERAL CHARACTERISTICS	TOTAL FOREIGN BORN	FOREIGN CITIZENSHIP			UNITED STATES CITIZENSHIP		
		FOREIGN SECONDARY EDUCATION			UNITED STATES SECONDARY EDUCATION		
		BS FROM FOREIGN COLLEGE	BS FROM U.S. COLLEGE	NO REPORT OF BS OR COLLEGE	BS FROM FOREIGN COLLEGE	BS FROM U.S. COLLEGE	NO REPORT OF BS OR COLLEGE
TOTAL ENGINEERS REPORTING - - - -	23,100	3,000	1,100	800	4,100	3,800	3,000
HIGHEST DEGREE							
DOCTORATE - - - - -	4,700	1,000	100	300	1,000	600	800
PROFESSIONAL MEDICAL - - - -	1,400	-----	-----	100	100	100	600
PROFESSIONAL ENGINEER - - - -	7,300	1,300	400	300	1,300	1,200	900
MASTER'S - - - - -	8,500	700	600	-----	1,700	1,800	-----
BACHELOR'S - - - - -	500	-----	-----	-----	-----	-----	300
LESS THAN BACHELOR'S - - - -	300	-----	-----	100	-----	-----	300
OTHER - - - - -	300	-----	-----	-----	-----	-----	100
NO REPORT - - - - -							
CURRICULUM OF BACHELOR'S DEGREE							
AEROSPACE - - - - -	800	-----	100	-----	200	200	-----
CHEMICAL - - - - -	1,600	200	100	-----	400	300	-----
CIVIL - - - - -	3,400	600	300	-----	700	800	-----
ELECTRICAL - - - - -	3,800	400	-----	-----	900	800	-----
GENERAL - - - - -	1,400	100	100	-----	400	300	-----
MECHANICAL - - - - -	4,500	900	400	-----	800	1,000	-----
METALLURGICAL - - - - -	800	300	100	-----	200	100	-----
MINERAL - - - - -	700	200	100	-----	100	200	-----
OTHER - - - - -	1,300	200	100	-----	400	200	-----
NO REPORT - - - - -	4,800	-----	-----	800	100	-----	2,900
STUDENT STATUS							
FULL-TIME - - - - -	400	200	100	-----	-----	100	-----
PART-TIME - - - - -	1,000	200	100	-----	100	200	-----
NO REPORT - - - - -	21,700	2,600	1,000	800	3,900	3,500	3,000
PROFESSIONAL EMPLOYMENT STATUS							
PROFESSIONALLY EMPLOYED - - -	21,900	2,900	1,100	800	3,900	3,700	2,700
SEEKING EMPLOYMENT - - - -	300	100	100	-----	100	-----	-----
NOT SEEKING EMPLOYMENT - - -	800	100	-----	-----	100	100	200
NO REPORT - - - - -	100	-----	-----	-----	-----	-----	-----

NAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969  
 CHARACTERISTICS OF FOREIGN BORN ENGINEERS MEETING CRITERIA

CITIZENSHIP, PLACE OF SECONDARY EDUCATION, AND PLACE OF BACHELOR'S DEGREE										
FOREIGN CITIZENSHIP			UNITED STATES CITIZENSHIP						NO REPORT OF CITIZEN- SHIP	
BS FROM FOREIGN COLLEGE	BS FROM U.S. COLLEGE	NO REPORT OF BS OR COLLEGE	BS FROM FOREIGN COLLEGE	BS FROM U.S. COLLEGE	NO REPORT OF BS OR COLLEGE	BS FROM FOREIGN COLLEGE	BS FROM U.S. COLLEGE	NO REPORT OF BS OR COLLEGE		
00	3,000	1,100	800	4,100	3,800	3,000	200	6,000	800	300
00	1,000	100	300	1,000	600	800	100	600	-----	100
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
00	-----	-----	100	100	100	600	-----	100	300	-----
00	1,300	400	300	1,300	1,200	900	100	1,700	100	100
00	700	600	-----	1,700	1,800	-----	-----	3,500	-----	100
	-----	-----	-----	-----	-----	300	-----	-----	200	-----
	-----	-----	100	-----	-----	300	-----	-----	-----	-----
	-----	-----	-----	-----	-----	100	-----	-----	100	-----
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
800	-----	100	-----	200	200	-----	-----	300	-----	-----
600	200	100	-----	400	300	-----	-----	600	-----	-----
400	600	300	-----	700	800	-----	-----	1,000	-----	-----
800	400	-----	-----	900	800	-----	-----	1,600	-----	-----
400	100	100	-----	400	300	-----	-----	500	-----	-----
500	900	400	-----	800	1,000	-----	-----	1,400	-----	-----
800	300	100	-----	200	100	-----	-----	200	-----	-----
700	200	100	-----	100	200	-----	-----	100	-----	-----
300	200	100	-----	400	200	-----	-----	300	-----	-----
800	-----	-----	800	100	-----	2,900	-----	-----	700	100
400	200	100	-----	-----	100	-----	-----	-----	-----	-----
000	200	100	-----	100	200	-----	-----	200	-----	-----
700	2,600	1,000	800	3,900	3,500	3,000	200	5,700	700	300
900	2,900	1,100	800	3,900	3,700	2,700	200	5,800	600	300
300	100	100	-----	100	-----	-----	-----	100	-----	-----
800	100	-----	-----	100	100	200	-----	100	100	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----



NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
CHARACTERISTICS OF FOREIGN BORN ENGINEERS MEETING CRITERIA--

CITIZENSHIP, PLACE OF SECONDARY EDUCATION							
GENERAL CHARACTERISTICS	TOTAL FOREIGN BORN	FOREIGN CITIZENSHIP			UNITED STATES		
		BS FROM FOREIGN COLLEGE	BS FROM U.S. COLLEGE	NO REPORT OF BS OR COLLEGE	FOREIGN SECONDARY EDUCATION		RE OF CO
					BS FROM FOREIGN COLLEGE	BS FROM U.S. COLLEGE	
TYPE OF EMPLOYER							
PRIV. INDUSTRY, BUSINESS - - -	15,400	1,900	800	500	2,800	2,600	
SELF-EMPLOYED - - - - -	900	-----	-----	-----	200	200	
COLLEGE, UNIVERSITY - - - -	2,800	700	100	200	500	400	
JR. COLLEGE, TECH. INST. - - -	-----	-----	-----	-----	-----	-----	
SEC., ELEM., OTHER SCHOOL - - -	-----	-----	-----	-----	-----	-----	
NONPROFIT ORGANIZATION - - -	500	100	-----	-----	100	100	
FEDERAL GOVERNMENT - - - -	1,100	-----	-----	-----	200	200	
USPHS, MILITARY SERVICE - - -	100	-----	-----	-----	-----	-----	
STATE GOVERNMENT - - - - -	400	-----	-----	-----	100	100	
LOCAL GOVERNMENT - - - - -	300	-----	-----	-----	-----	-----	
OTHER - - - - -	400	-----	-----	-----	100	100	
NO REPORT - - - - -	1,200	100	100	-----	100	200	
PRODUCTS OR SERVICES							
AGRICULTURE AND FOOD - - - -	200	-----	-----	-----	-----	-----	
AIRCRAFT AND SPACE - - - - -	2,700	300	100	100	500	500	
CERAMICS - - - - -	100	-----	-----	-----	-----	-----	
CHEMICALS, ALLIED PROD. - - -	1,300	200	100	100	200	200	
COMMUNICATIONS - - - - -	500	100	-----	-----	100	100	
COMPUTERS - - - - -	1,000	100	100	-----	200	200	
CONSTRUCTION, CIVIL ENGR. - - -	3,500	400	200	100	600	600	
EDUC., INFORMATION SERV. - - -	1,700	400	100	100	300	200	
ELECTRICAL EQUIP., SERV. - - -	1,200	100	-----	-----	300	200	
ELECTRONIC EQUIP., SERV. - - -	1,900	100	-----	-----	300	300	
LAB-SCI-PHOTO-OPT EQUIP. - - -	300	-----	-----	-----	-----	100	
MACHINERY, MECH. EQUIP. - - -	2,200	300	200	100	400	400	
MARINE TRANSPORTATION - - - -	400	-----	-----	-----	100	-----	
MEDICAL, HEALTH SERVICES - - -	100	-----	-----	-----	-----	-----	
METALS, BASIC - - - - -	1,100	200	100	100	200	100	
METAL FABRICATED PROD. - - - -	400	-----	-----	-----	100	100	
MINING - - - - -	400	100	-----	-----	100	100	
MOTOR VEHICLE TRANS. - - - -	200	-----	-----	-----	-----	-----	
ORDNANCE - - - - -	200	-----	-----	-----	-----	-----	
PETROLEUM - - - - -	600	100	100	-----	100	100	
RAILWAY, RAPID TRANSIT - - - -	100	-----	-----	-----	-----	-----	
UTILITIES - - - - -	700	100	-----	-----	100	100	
OTHER PRODUCTS, SERVICES - - -	800	100	-----	-----	100	100	
NO REPORT - - - - -	1,400	200	100	100	200	200	

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## CHARACTERISTICS OF FOREIGN BORN ENGINEERS MEETING CRITERIA--CONTINUED

## CITIZENSHIP, PLACE OF SECONDARY EDUCATION, AND PLACE OF BACHELOR'S DEGREE

TOTAL FOREIGN BORN	FOREIGN CITIZENSHIP			UNITED STATES CITIZENSHIP						NO REPORT OF CITIZEN- SHIP
	BS FROM FOREIGN COLLEGE	BS FROM U.S. COLLEGE	NO REPORT OF BS OR COLLEGE	BS FROM FOREIGN COLLEGE	BS FROM U.S. COLLEGE	NO REPORT OF BS OR COLLEGE	BS FROM FOREIGN COLLEGE	BS FROM U.S. COLLEGE	NO REPORT OF BS OR COLLEGE	
- 15,400	1,900	800	500	2,800	2,600	1,800	200	4,200	500	200
- 900	-----	-----	-----	200	200	200	-----	200	100	-----
- 2,800	700	100	200	500	400	400	-----	400	-----	-----
- -----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
- -----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
- 500	100	-----	-----	100	100	100	-----	100	-----	-----
- 1,100	-----	-----	-----	200	200	100	-----	500	100	-----
- 100	-----	-----	-----	-----	-----	-----	-----	100	-----	-----
- 400	-----	-----	-----	100	100	-----	-----	100	-----	-----
- 300	-----	-----	-----	-----	-----	-----	-----	100	-----	-----
- 400	-----	-----	-----	100	100	-----	-----	100	-----	-----
- 1,200	100	100	-----	100	200	300	-----	200	100	-----
- -----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
- 200	-----	-----	-----	-----	-----	-----	-----	100	-----	-----
- 2,700	300	100	100	500	500	300	-----	800	100	-----
- 100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
- 1,300	200	100	100	200	200	100	-----	400	-----	-----
- 500	100	-----	-----	100	100	100	-----	100	-----	-----
- 1,000	100	100	-----	200	200	100	-----	300	-----	-----
- 3,500	400	200	100	600	600	500	100	900	100	-----
- 1,700	400	100	100	300	200	300	-----	300	-----	-----
- 1,200	100	-----	-----	300	200	200	-----	300	-----	-----
- 1,900	100	-----	-----	300	300	200	-----	700	100	-----
- 300	-----	-----	-----	-----	100	-----	-----	100	-----	-----
- 2,200	300	200	100	400	400	300	-----	500	100	-----
- 400	-----	-----	-----	100	-----	-----	-----	100	-----	-----
- 100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
- 1,100	200	100	100	200	100	100	-----	200	-----	-----
- 400	-----	-----	-----	100	100	100	-----	100	-----	-----
- 400	100	-----	-----	100	100	-----	-----	-----	-----	-----
- 200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
- 200	-----	-----	-----	-----	-----	-----	-----	100	-----	-----
- 600	100	100	-----	100	100	-----	-----	200	-----	-----
- 100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
- 700	100	-----	-----	100	100	100	-----	300	-----	-----
- 800	100	-----	-----	100	100	100	-----	200	-----	-----
- 0	200	100	100	200	200	300	-----	200	100	-----

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL  
CHARACTERISTICS OF FOREIGN BORN ENGINEERS MEETING

CITIZENSHIP, PLACE OF SECOND

GENERAL CHARACTERISTICS	TOTAL FOREIGN BORN	FOREIGN CITIZENSHIP			
		BS FROM FOREIGN COLLEGE	BS FROM U.S. COLLEGE	NO REPORT OF BS OR COLLEGE	FOREIGN S BS FROM FOREIGN COLLEGE
AREAS OF TECHNOLOGY					
BIOMEDICAL - - - - -	100	-----	-----	-----	-----
BEHAVIORAL AND SOCIAL - - -	300	-----	-----	-----	-----
CHEMICAL AND MATERIALS - - -	800	200	-----	-----	200
METALLURGICAL - - - - -	1,100	300	100	100	200
EARTH, ATMOSPHERE, MARINE - -	700	100	100	100	200
ENVIRONMENTAL, STRUCTURAL - -	2,900	400	200	100	500
ELECTROMAGNETIC - - - - -	2,900	200	-----	100	500
DYNAMICS AND MECHANICS - - -	3,800	600	200	100	700
HEAT, LIGHT, APPL. PHYSICS - -	1,100	200	-----	-----	200
NUCLEAR - - - - -	200	-----	-----	-----	-----
ENGR. PROCESS-APPLICATION - -	1,800	200	100	100	300
AUTOMATION AND CONTROL - - -	900	100	-----	-----	200
WORK MGMT, EVALUATION - - - -	3,100	300	200	-----	500
INFORMATION, MATHEMATICS - - -	1,100	200	100	100	200
OTHER - - - - -	500	-----	-----	-----	100
NO REPORT - - - - -	1,800	200	100	-----	200
FUNCTIONS					
DESIGN - - - - -	4,500	600	200	100	800
DEVELOPMENT - - - - -	2,500	300	100	100	500
RESEARCH - - - - -	3,100	700	100	200	600
PRODUCTION - - - - -	2,500	300	200	100	400
CONTROL - - - - -	6,700	500	300	100	1,200
TEACHING - - - - -	1,700	400	100	100	300
OTHER - - - - -	400	-----	-----	-----	100
NO REPORT - - - - -	1,700	200	100	100	200
SUPERVISORY LEVEL					
NO REG. SUPV. GIVEN - - - -	5,000	1,000	300	300	800
INDIRECT OR STAFF - - - - -	3,200	400	200	100	600
TEAM OR UNIT - - - - -	2,300	300	100	100	400
PROJECT OR SECTION - - - - -	5,000	600	300	200	1,000
MAJOR DEPT., DIV., PROGRAM - -	3,400	300	100	100	600
GEN. MGMT OF ORGANIZATION - -	1,900	100	-----	-----	300
NO REPORT - - - - -	2,200	300	100	100	300

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

CHARACTERISTICS OF FOREIGN BORN ENGINEERS MEETING CRITERIA--CONTINUED

CITIZENSHIP, PLACE OF SECONDARY EDUCATION, AND PLACE OF BACHELOR'S DEGREE

CATEGORIES	TOTAL FOREIGN BORN	FOREIGN CITIZENSHIP			UNITED STATES CITIZENSHIP						NO REPORT OF CITIZEN- SHIP
		FOREIGN SECONDARY EDUCATION			SECONDARY EDUCATION FROM U.S. OR NOT REPORTED						
		BS FROM FOREIGN COLLEGE	BS FROM U.S. COLLEGE	NO REPORT OF BS OR COLLEGE	BS FROM FOREIGN COLLEGE	BS FROM U.S. COLLEGE	NO REPORT OF BS OR COLLEGE	BS FROM FOREIGN COLLEGE	BS FROM U.S. COLLEGE	NO REPORT OF BS OR COLLEGE	
ALL	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
ALL	300	-----	-----	-----	-----	-----	-----	-----	100	-----	-----
ALL	800	200	-----	-----	200	100	100	-----	200	-----	-----
ALL	1,100	300	100	100	200	100	200	-----	200	-----	-----
MARINE	700	100	100	100	200	100	100	-----	100	-----	-----
ACTURAL	2,900	400	200	100	500	500	400	-----	700	100	-----
ALL	2,900	200	-----	100	500	400	400	-----	1,100	100	-----
PHYSICS	3,800	600	200	100	700	700	400	-----	800	100	100
PHYSICS	1,100	200	-----	-----	200	200	100	-----	300	-----	-----
ALL	200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
EDUCATION	1,800	200	100	100	300	300	300	-----	600	100	-----
CONTROL	900	100	-----	-----	200	200	100	-----	200	-----	-----
ON	3,100	300	200	-----	500	600	300	-----	1,000	200	-----
PHYSICS	1,100	200	100	100	200	200	100	-----	200	-----	-----
ALL	500	-----	-----	-----	100	100	100	-----	200	-----	-----
ALL	1,800	200	100	-----	200	300	400	-----	300	100	100
ALL	4,500	600	200	100	800	900	600	100	1,000	200	100
ALL	2,500	300	100	100	500	400	200	-----	800	100	-----
ALL	3,100	700	100	200	600	400	400	-----	600	-----	-----
ALL	2,500	300	200	100	400	400	200	-----	900	100	-----
ALL	6,700	500	300	100	1,200	1,200	1,000	100	2,100	300	100
ALL	1,700	400	100	100	300	300	300	-----	300	-----	-----
ALL	400	-----	-----	-----	100	100	-----	-----	100	-----	-----
ALL	1,700	200	100	100	200	200	400	-----	300	100	-----
ALL	5,000	1,000	300	300	800	800	500	-----	1,100	100	100
ALL	3,200	400	200	100	600	500	300	-----	1,000	100	-----
ALL	2,300	300	100	100	400	400	300	-----	500	100	100
ALL	5,000	600	300	200	1,000	800	600	100	1,200	100	-----
PROGRAM	3,400	300	100	100	600	500	500	-----	1,200	100	-----
EDUCATION	1,900	100	-----	-----	300	400	300	-----	700	100	-----
ALL	2,200	300	100	100	300	300	500	-----	300	100	100

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
CHARACTERISTICS OF FOREIGN BORN ENGINEERS MEETING CRITERIA--

GENERAL CHARACTERISTICS	TOTAL FOREIGN BORN	FOREIGN CITIZENSHIP			FOREIGN SECONDARY EDUCATION		
		BS FROM FOREIGN COLLEGE	BS FROM U.S. COLLEGE	NO REPORT OF BS OR COLLEGE	BS FROM FOREIGN COLLEGE	BS FROM U.S. COLLEGE	RE OF CO
ALL GEOGRAPHIC LOCATIONS - - - -	23,100	3,000	1,100	800	4,100	3,800	
NEW ENGLAND - - - - -	1,700	300	-----	100	300	300	
CONNECTICUT - - - - -	600	100	-----	-----	100	100	
MAINE - - - - -	-----	-----	-----	-----	-----	-----	
MASSACHUSETTS - - - - -	1,000	100	-----	100	200	200	
NEW HAMPSHIRE - - - - -	-----	-----	-----	-----	-----	-----	
RHODE ISLAND - - - - -	100	-----	-----	-----	-----	-----	
VERMONT - - - - -	-----	-----	-----	-----	-----	-----	
MIDDLE ATLANTIC - - - - -	6,700	800	200	300	1,000	1,100	
NEW JERSEY - - - - -	1,600	200	-----	100	300	300	
NEW YORK - - - - -	3,500	400	100	100	600	600	
PENNSYLVANIA - - - - -	1,500	200	100	100	200	200	
EAST NORTH CENTRAL - - - - -	3,700	600	300	100	700	600	
ILLINOIS - - - - -	1,300	200	100	-----	200	200	
INDIANA - - - - -	400	100	-----	-----	100	100	
MICHIGAN - - - - -	700	100	100	-----	100	100	
OHIO - - - - -	1,000	100	-----	-----	200	100	
WISCONSIN - - - - -	300	100	-----	-----	-----	-----	
WEST NORTH CENTRAL - - - - -	900	200	-----	-----	100	100	
IOWA - - - - -	100	-----	-----	-----	-----	-----	
KANSAS - - - - -	100	-----	-----	-----	-----	-----	
MINNESOTA - - - - -	200	-----	-----	-----	-----	-----	
MISSOURI - - - - -	400	100	-----	-----	100	-----	
NEBRASKA - - - - -	-----	-----	-----	-----	-----	-----	
NORTH DAKOTA - - - - -	-----	-----	-----	-----	-----	-----	
SOUTH DAKOTA - - - - -	-----	-----	-----	-----	-----	-----	
SOUTH ATLANTIC - - - - -	2,500	300	200	100	400	300	
DELAWARE - - - - -	100	-----	-----	-----	-----	-----	
DISTRICT OF COLUMBIA - - - - -	400	-----	-----	-----	100	-----	
FLORIDA - - - - -	500	-----	100	-----	-----	100	
GEORGIA - - - - -	200	100	-----	-----	100	-----	
MARYLAND - - - - -	600	100	-----	-----	100	100	
NORTH CAROLINA - - - - -	200	-----	-----	-----	-----	-----	
SOUTH CAROLINA - - - - -	100	-----	-----	-----	-----	-----	
VIRGINIA - - - - -	400	-----	-----	-----	-----	100	
WEST VIRGINIA - - - - -	100	-----	-----	-----	-----	-----	

## NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969

## CHARACTERISTICS OF FOREIGN BORN ENGINEERS MEETING CRITERIA--CONTINUED

CITIZENSHIP, PLACE OF SECONDARY EDUCATION, AND PLACE OF BACHELOR'S DEGREE											
TOTAL FOREIGN BORN	FOREIGN CITIZENSHIP			UNITED STATES CITIZENSHIP							NO REPORT OF CITIZEN- SHIP
				FOREIGN SECONDARY EDUCATION			SECONDARY EDUCATION FROM U.S. OR NOT REPORTED				
	BS FROM FOREIGN COLLEGE	BS FROM U.S. COLLEGE	NO REPORT OF BS OR COLLEGE	BS FROM FOREIGN COLLEGE	BS FROM U.S. COLLEGE	NO REPORT OF BS OR COLLEGE	BS FROM FOREIGN COLLEGE	BS FROM U.S. COLLEGE	NO REPORT OF BS OR COLLEGE		
- - 23,100	3,000	1,100	800	4,100	3,800	3,000	200	6,000	800	300	
- - 1,700	300	-----	100	300	300	200	-----	300	100	-----	
- - 600	100	-----	-----	100	100	100	-----	200	100	-----	
- - -----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
- - 1,000	100	-----	100	200	200	100	-----	200	100	-----	
- - -----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
- - 100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
- - -----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
- - 6,700	800	200	300	1,000	1,100	1,000	-----	1,800	200	100	
- - 1,600	200	-----	100	300	300	300	-----	400	-----	-----	
- - 3,500	400	100	100	600	600	600	-----	1,000	200	100	
- - 1,500	200	100	100	200	200	200	-----	400	-----	-----	
- - 3,700	600	300	100	700	600	400	-----	1,000	100	-----	
- - 1,300	200	100	-----	200	200	200	-----	300	-----	-----	
- - 400	100	-----	-----	100	100	-----	-----	100	-----	-----	
- - 700	100	100	-----	100	100	100	-----	200	-----	-----	
- - 1,000	100	-----	-----	200	100	100	-----	300	-----	-----	
- - 300	100	-----	-----	-----	-----	-----	-----	100	-----	-----	
- - 900	200	-----	-----	100	100	100	-----	200	-----	-----	
- - 100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
- - 100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
- - 200	-----	-----	-----	-----	-----	-----	-----	100	-----	-----	
- - 400	100	-----	-----	100	-----	-----	-----	100	-----	-----	
- - -----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
- - -----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
- - 2,500	300	200	100	400	300	300	-----	700	100	-----	
- - 100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
- - 400	-----	-----	-----	100	-----	100	-----	100	-----	-----	
- - 500	-----	100	-----	-----	100	100	-----	100	-----	-----	
- - 200	100	-----	-----	100	-----	-----	-----	100	-----	-----	
- - 600	100	-----	-----	100	100	100	-----	200	-----	-----	
- - 200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
- - 100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
- - 400	-----	-----	-----	-----	100	100	-----	100	-----	-----	
- - 100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL  
CHARACTERISTICS OF FOREIGN BORN ENGINEERS MEETING CRITERIA

CITIZENSHIP, PLACE OF SECONDARY EDUCATION

GENERAL CHARACTERISTICS	TOTAL FOREIGN BORN	FOREIGN CITIZENSHIP			FOREIGN SECONDARY	
		BS FROM FOREIGN COLLEGE	BS FROM U.S. COLLEGE	NO REPORT OF BS OR COLLEGE	BS FROM FOREIGN COLLEGE	BS FROM U.S. COLLEGE
GEOGRAPHIC LOCATION, CONTINUED						
EAST SOUTH CENTRAL - - - - -	400	100	-----	-----	100	100
ALABAMA - - - - -	100	-----	-----	-----	-----	-----
KENTUCKY - - - - -	100	-----	-----	-----	-----	-----
MISSISSIPPI - - - - -	-----	-----	-----	-----	-----	-----
TENNESSEE - - - - -	200	-----	-----	-----	-----	-----
WEST SOUTH CENTRAL - - - - -	1,100	100	100	100	200	200
ARKANSAS - - - - -	-----	-----	-----	-----	-----	-----
LOUISIANA - - - - -	200	-----	-----	-----	-----	100
OKLAHOMA - - - - -	100	-----	-----	-----	-----	-----
TEXAS - - - - -	700	100	-----	-----	100	100
MOUNTAIN - - - - -	700	100	100	-----	100	200
ARIZONA - - - - -	100	-----	-----	-----	-----	-----
COLORADO - - - - -	200	-----	-----	-----	-----	100
IDAHO - - - - -	-----	-----	-----	-----	-----	-----
MONTANA - - - - -	-----	-----	-----	-----	-----	-----
NEVADA - - - - -	-----	-----	-----	-----	-----	-----
NEW MEXICO - - - - -	100	-----	-----	-----	-----	-----
UTAH - - - - -	100	-----	-----	-----	-----	-----
WYOMING - - - - -	-----	-----	-----	-----	-----	-----
PACIFIC - - - - -	5,000	500	300	100	1,000	900
ALASKA - - - - -	-----	-----	-----	-----	-----	-----
CALIFORNIA - - - - -	4,200	400	200	100	800	700
HAWAII - - - - -	100	-----	-----	-----	-----	-----
OREGON - - - - -	100	-----	-----	-----	-----	-----
WASHINGTON - - - - -	600	100	-----	-----	100	100
OUTLYING AREAS - - - - -	100	-----	-----	-----	-----	-----
CANAL ZONE - - - - -	-----	-----	-----	-----	-----	-----
GUAM - - - - -	-----	-----	-----	-----	-----	-----
PUERTO RICO - - - - -	100	-----	-----	-----	-----	-----
VIRGIN ISLANDS - - - - -	-----	-----	-----	-----	-----	-----
FOREIGN - - - - -	300	-----	-----	-----	100	100

NOTE - GROUPS MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING. GROUPS OF CURRICULA ARE DEFINED: AERONAUTICAL, CIVIL (ARCHITECTURAL, CIVIL, CONSTRUCTION, ENVIRONMENTAL, SANITARY, (COMMUNICATIONS, ELECTRICAL, ELECTRONIC), GENERAL (ENGINEERING MECHANICS, ENGINEERING SCIENCE, ENGINEERING TECHNOLOGY, INDUSTRIAL, MATERIALS), MECHANICAL (METALLURGICAL, WELDING), MINERAL (GEOLOGICAL, GEOPHYSICAL, MINERAL, MINING, PETROLEUM ENGINEERING, CERAMIC, NAVAL ARCHITECTURE, NUCLEAR, TEXTILE, OTHER ENGINEERING PHYSICS, OTHER NONENGINEERING).

NATIONAL REGISTER OF SCIENTIFIC AND TECHNICAL PERSONNEL, 1969  
 CHARACTERISTICS OF FOREIGN BORN ENGINEERS MEETING CRITERIA--CONTINUED

TOTAL FOREIGN PERSONNEL	CITIZENSHIP, PLACE OF SECONDARY EDUCATION, AND PLACE OF BACHELOR'S DEGREE									NO REPORT OF CITIZEN- SHIP
	FOREIGN CITIZENSHIP			UNITED STATES CITIZENSHIP						
				FOREIGN SECONDARY EDUCATION			SECONDARY EDUCATION FROM U.S. OR NOT REPORTED			
	BS FROM FOREIGN COLLEGE	BS FROM U.S. COLLEGE	NO REPORT OF BS OR COLLEGE	BS FROM FOREIGN COLLEGE	BS FROM U.S. COLLEGE	NO REPORT OF BS OR COLLEGE	BS FROM FOREIGN COLLEGE	BS FROM U.S. COLLEGE	NO REPORT OF BS OR COLLEGE	
400	100	-----	-----	100	100	100	-----	100	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1,100	100	100	100	200	200	100	-----	200	-----	-----
200	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
700	100	-----	-----	100	100	100	-----	100	-----	-----
700	100	100	-----	100	200	-----	-----	200	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
200	-----	-----	-----	-----	100	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1,000	500	300	100	1,000	900	700	-----	1,400	100	100
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1,200	400	200	100	800	700	600	-----	1,200	100	100
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
600	100	-----	-----	100	100	-----	-----	200	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
300	-----	-----	-----	100	100	-----	-----	100	-----	-----

AEROSPACE (AERONAUTICAL AND  
 SPACE), AGRICULTURAL, CIVIL, CONSTRUCTION, ENVIRONMENTAL, SANITARY, TRANSPORTATION), ELECTRICAL  
 (ELECTRONIC), GENERAL (ENGINEERING MECHANICS, ENGINEERING GENERAL, ENGINEERING PHYSICS,  
 METALLURGICAL, MINING, PETROLEUM), OTHER (AGRICULTURAL,  
 BUSINESS ADMINISTRATION, CHEMISTRY,  
 NUCLEAR, TEXTILE, OTHER ENGINEERING, BUSINESS ADMINISTRATION, CHEMISTRY,



## NATIONAL ENGINEERS REGISTER

CONDUCTED BY THE  
ENGINEERS JOINT COUNCIL  
345 EAST 47TH STREET, NEW YORK, N. Y. 10017  
AND THE NATIONAL SCIENCE FOUNDATION

PLEASE DO NOT  
WRITE IN  
THIS COLUMN

PLEASE PRINT ANSWERS IN DARK INK OR TYPE

IF YOUR NAME OR ADDRESS IS INCORRECT,  
PLEASE ENTER CORRECT INFORMATION BELOW:  
PLEASE GIVE FULL NAME

THE PERSONAL INFORMATION YOU PROVIDE IS CONSIDERED PRIVILEGED  
AND IS NOT AVAILABLE FOR PRIVATE OR COMMERCIAL PURPOSES.

1. DATE OF BIRTH		2. STATE OR FOREIGN COUNTRY OF BIRTH		3. STATE OR FOREIGN COUNTRY OF SECONDARY SCHOOL GRADUATION		4. SEX	
Month	Day	Year				<input type="checkbox"/> 1 - MALE	<input type="checkbox"/> 2 - FEMALE
5. CITIZENSHIP (check one) <input type="checkbox"/> 1 - USA <input type="checkbox"/> 2 - NON-USA (specify country) _____							
6. How many years of professional work experience requiring a bachelor's degree or its equivalent, including teaching, have you had? _____							
EDUCATION:							
7. COLLEGE, UNIVERSITY, OR OTHER INSTITUTION (Include city and state)				DEGREE, IF ANY	YEAR OF DEGREE	CURRICULUM (Select Name and Number from List A)	
8. If you are a student, check your status. <input type="checkbox"/> 1 - STUDENT, FULL-TIME <input type="checkbox"/> 2 - STUDENT, PART-TIME							
PROFESSIONAL IDENTIFICATION:							
9. If you regard yourself primarily as an engineer check here: <input type="checkbox"/> If you regard yourself as other than an engineer, please identify yourself as: <input type="checkbox"/> 1 - ARCHITECT <input type="checkbox"/> 3 - CHEMIST <input type="checkbox"/> 5 - MATHEMATICIAN <input type="checkbox"/> 7 - TECHNICIAN <input type="checkbox"/> 2 - PHYSICIST <input type="checkbox"/> 4 - GEOLOGIST <input type="checkbox"/> 6 - METALLURGIST <input type="checkbox"/> 8 - OTHER (SPECIFY) _____							
10. PROFESSIONAL SOCIETY MEMBERSHIP: Circle the number in front of all professional societies of which you are a member. For write-ins include only NATIONAL societies and use identifying words in full. 1A - AERONAUTICS AND ASTRONAUTICS 1B - AGRICULTURAL (ASAE) 1C - AIR POLLUTION CONTROL (APCA) 1D - AUDIO (AES) 1E - AUTOMOTIVE (SAE) 1F - CERAMIC (NICE) 1G - CHEMICAL (AIChE) 1H - CIVIL (ASCE) 1I - CONCRETE (ACI) 1J - CONSULTING (AIOR) 1K - CORROSION (NACE) 1L - COST (RAGE) 1M - COUNTRY (NACE) 1N - ELECTRICAL AND ELECTRONICS (IEEE) 1O - FIRE PROTECTION (SFPE) 1P - FLUID POWER (FPE) 1Q - HEATING, REFRIGERATING, AND AIR-CONDITIONING (ASHRAE) 1R - HISTORY (SHOT) 1S - INDUSTRIAL (AIIE) 1T - INSTRUMENT (ISA) 1U - ILLUMINATING (IES) 1V - NUCLEAR (ANS) 1W - PACKAGING & HANDLING (SPHE) 1X - PACKAGING, HANDLING AND LOGISTICS (NIPHE) 1Y - PHOTOGRAPHIC (SPSE) 1Z - PHOTO-OPTICAL INSTRUMENTATION (SPIE) 1A - IRON AND STEEL (AISE) 1B - LUBRICATION (ASLE) 1C - MARINE TECHNOLOGY (MTS) 1D - MATERIAL MANAGEMENT (IMMS) 1E - MECHANICAL (ASME) 1F - METALS (ASM) 1G - MILITARY (SAME) 1H - MINING, METALLURGICAL, PETROLEUM (AIME) 1I - MOTION PICTURE (SMPTA) 1J - NAVAL ARCHITECTS AND MARINE (SNAMPE) 1K - NAVAL ENGINEERS (ASNE) 1L - NAVAL SHIP SYSTEMS COMMAND (ASE) 1M - NONDESTRUCTIVE TESTING (ASNT) 1N - NUCLEAR (ANS) 1O - PACKAGING & HANDLING (SPHE) 1P - PACKAGING, HANDLING AND LOGISTICS (NIPHE) 1Q - PHOTOGRAPHIC (SPSE) 1R - PHOTO-OPTICAL INSTRUMENTATION (SPIE) 1S - PLANT (AIPE) 1T - PLASTICS (SPE) 1U - POWER (NAPE) 1V - PROFESSIONAL (NSPE) 1W - PULP AND PAPER (TAPPI) 1X - QUALITY CONTROL (ASQC) 1Y - RAILWAY (AREA) 1Z - REPRODUCTION (SRE) 1A - SAFETY (ASSE) 1B - SANITARY (ASSE) 1C - STANDARDS (SES) 1D - STRESS ANALYSIS (SESA) 1E - TRAFFIC (ITE) 1F - TESTING AND MATERIALS (ASTM) 1G - TOOL AND MANUFACTURING (ASTME) 1H - VALVE (SAVE) 1I - WATER POLLUTION CONTROL (WPCF) 1J - WATER WORKS (AWWA) 1K - WELDING (AWS) 1L - WELL LOG ANALYSTS (SPWLA) 1M - WOMEN (SWE) 1N - OTHER (SPECIFY) _____ 1O - NONE							
11. Are you registered by a state board of engineering examiners? <input type="checkbox"/> Yes <input type="checkbox"/> No If so, in which state(s) are you registered? _____							

<b>5. CITIZENSHIP (check one)</b> <input type="checkbox"/> 1 - USA <input type="checkbox"/> 2 - NON-USA (specify country)	<b>6. How many years of professional work experience requiring a bachelor's degree or its equivalent, including teaching, have you had?</b>	<input type="checkbox"/> 2 - FEMALE
<b>EDUCATION:</b>		
<b>7. COLLEGE, UNIVERSITY, OR OTHER INSTITUTION</b> (Include city and state)	<b>DEGREE, YEAR OF DEGREE IF ANY</b>	<b>CURRICULUM</b> (Select Name and Number from List A)
<b>8. If you are a student, check your status.</b> <input type="checkbox"/> 1 - STUDENT, FULL-TIME <input type="checkbox"/> 2 - STUDENT, PART-TIME		
<b>PROFESSIONAL IDENTIFICATION:</b>		
<b>9. If you regard yourself primarily as an engineer check here:</b> <input type="checkbox"/> If you regard yourself as other than an engineer, please identify yourself as:		
<input type="checkbox"/> 1 - ARCHITECT <input type="checkbox"/> 3 - CHEMIST <input type="checkbox"/> 5 - MATHEMATICIAN <input type="checkbox"/> 7 - TECHNICIAN <input type="checkbox"/> 2 - PHYSICIST <input type="checkbox"/> 4 - GEOLOGIST <input type="checkbox"/> 6 - METALLURGIST <input type="checkbox"/> 8 - OTHER (SPECIFY)		
<b>10. PROFESSIONAL SOCIETY MEMBERSHIP:</b> Circle the number in front of all professional societies of which you are a member. For write-ins include only NATIONAL societies and use identifying words in full.		
1A - AERONAUTICS AND ASTRONAUTICS 1B - AGRICULTURAL (ASAE) 1C - AIR POLLUTION CONTROL 1D - AUDIO (AES) 1E - AUTOMOTIVE (SAE) 1F - CERAMIC (NCE) 1G - CHEMICAL (AIChE) 1H - CIVIL (ASCE) 1I - CONCRETE (ACI) 1J - CONSULTING (AIChE) 1K - CORROSION (NACE) 1L - COST (AACE) 1M - COUNTY (NACE) 1N - EDUCATION (ASEE) 1O - ELECTRICAL AND ELECTRONICS (IEEE) 1P - FIRE PROTECTION (SFPE) 1Q - FLUID POWER (FPS) 1R - HEATING, REFRIGERATING, AND AIR-CONDITIONING (ASHRAE) 1S - HISTORY (SHOT) 1T - INDUSTRIAL (AIIE) 1U - INSTRUMENT (ISA) 1V - ILLUMINATING (IES)	1W - IRON AND STEEL (AISE) 1X - LUBRICATION (ASLE) 1Y - MARINE TECHNOLOGY (MTS) 1Z - MATERIAL MANAGEMENT (IMMS) 2A - MECHANICAL (ASME) 2B - METALS (ASM) 2C - MILITARY (ASME) 2D - MINING, METALLURGICAL, PETROLEUM (AIME) 2E - MOTION PICTURE (SMPTA) 2F - NAVAL ARCHITECTS AND MARINE ENGINEERS (ASNE) 2G - NAVAL ENGINEERS (ASNE) 2H - NAVAL SHIP SYSTEMS COMMAND (ASE) 2I - NONDESTRUCTIVE TESTING (ASNT) 2J - NUCLEAR (ANS) 2K - PACKAGING & HANDLING (SPHE) 2L - PACKAGING, HANDLING AND LOGISTICS (NIELHE) 2M - PHOTOGRAMMETRY (ASP) 2N - PHOTOGRAPHIC (SPSE) 2O - PHOTO-OPTICAL INSTRUMENTATION (SPIE) 2P - PLANT (AIPE)	2Q - PLASTICS (SPE) 2R - POWER (NAPE) 2S - PROFESSIONAL (NSPE) 2T - PULP AND PAPER (TAPPI) 2U - QUALITY CONTROL (ASQC) 2V - RAILWAY (AREA) 2W - REPRODUCTION (SRE) 2X - SAFETY (ASSE) 2Y - SANITARY (ASSE) 2Z - STANDARDS (SES) 3A - STRESS ANALYSIS (SESA) 3B - TRAFFIC (ITE) 3C - TESTING AND MATERIALS (ASTM) 3D - TOOL AND MANUFACTURING (ASTME) 3E - VALUE (SAVE) 3F - WATER POLLUTION CONTROL (WFCE) 3G - WATER WORKS (AWWA) 3H - WELDING (AWS) 3I - WELL LOG ANALYSTS (SPWLA) 3J - WOMEN (SWE) 3A - OTHER (SPECIFY) 3X - NONE
<b>11. Are you registered by a state board of engineering examiners?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No If so: In which state(s) are you registered?		
<b>PROFESSIONAL EMPLOYMENT:</b>		
<b>12. Check your employment status.</b> <input type="checkbox"/> 1 - EMPLOYED FULL-TIME <input type="checkbox"/> 3 - UNEMPLOYED AND SEEKING EMPLOYMENT <input type="checkbox"/> 4 - NOT EMPLOYED AND NOT SEEKING EMPLOYMENT <input type="checkbox"/> 5 - RETIRED <input type="checkbox"/> 2 - EMPLOYED PART-TIME		
<b>13. Please give name of present principal employer (if self-employed write in "self", actual place of employment, and title of present position.</b>		
Name of present principal employer _____ Title of present position _____		
Actual place of employment (city and state) _____		
<b>14. Check the box of the category which is most appropriate for your present principal employer (check only one).</b> <input type="checkbox"/> 0 - PRIVATE INDUSTRY OR BUSINESS <input type="checkbox"/> 6 - FEDERAL GOVERNMENT—CIVILIAN EMPLOYEE <input type="checkbox"/> 1 - SELF-EMPLOYED <input type="checkbox"/> 7 - USPHS, MILITARY SERVICE—ACTIVE DUTY <input type="checkbox"/> 2 - COLLEGE OR UNIVERSITY <input type="checkbox"/> 8 - STATE GOVERNMENT <input type="checkbox"/> 3 - JUNIOR COLLEGE OR TECHNICAL INSTITUTE <input type="checkbox"/> 9 - LOCAL GOVERNMENT <input type="checkbox"/> 4 - SECONDARY, ELEMENTARY OR OTHER SCHOOL <input type="checkbox"/> 5 - NONPROFIT ORGANIZATION, OTHER THAN A SCHOOL <input type="checkbox"/> OTHER (specify) _____		

PLEASE DO NOT  
WRITE IN  
THIS COLUMN

11 12 13

**PROFESSIONAL EMPLOYMENT CONTINUED**

15. Is ANY of your work being supported or sponsored by U. S. Government funds? ☐ Yes ☐ No ☐ Don't know

If yes, is your work related to any of the following programs:

☐ A - AGRICULTURE ☐ B - HEALTH ☐ J - PUBLIC WORKS ☐ N - URBAN DEVELOPMENT  
☐ C - DEFENSE ☐ D - EDUCATION ☐ F - HOUSING ☐ K - RURAL DEVELOPMENT ☐ OTHER PROGRAM (Specify) \_\_\_\_\_  
☐ G - INTERNATIONAL ☐ H - NATURAL RESOURCES ☐ L - SPACE ☐ M - TRANSPORTATION \_\_\_\_\_

Approximate the total percent of your time devoted to these Federally supported activities. .... %.

16. Based upon your PRESENT employment, describe your Employment Profile:

PRESENT EMPLOYMENT PROFILE		SIGNIFICANT ADDITIONAL DESCRIPTIONS			
Number	Primary Description	Number List B	Number List C	Number List D	Number List E
	Product or Service from List B				
	Technology/Science from List C				
	Function from List D				
	Supervisory Responsibility from List E				

List "Additional Descriptions" for significant qualifications only; otherwise leave blank.

See enclosed lists for individual entries and example.

17. Based on your academic training and total work experience, describe your greatest competence profile showing the interdependence of area of technology or science, product or service, and function. If your greatest competence is the same as your PRESENT EMPLOYMENT PROFILE, check here ☐; if not, complete this profile.

GREATEST COMPETENCE PROFILE		SIGNIFICANT ADDITIONAL DESCRIPTIONS			
Number	Primary Description	Number List B	Number List C	Number List D	Number List E
	Product or Service from List B				
	Technology Science from List C				
	Function from List D				

**LANGUAGE AND AREA KNOWLEDGES:**

18. FOREIGN LANGUAGE: List the languages (other than English) in which you have competence and indicate with a check mark (✓) your proficiencies. If you have no foreign language competence, check here. ☐

PROFICIENCY			
CAN PREPARE AND DELIVER LECTURES	CAN CONVERSE	HAVE FACILITY TO TRANSLATE TECHNICAL JOURNALS	SOME KNOWLEDGE BUT CAN'T USE AS A

16. Based upon your PRESENT employment, describe your Employment Profile:

PRESENT EMPLOYMENT PROFILE				
PRIMARY DESCRIPTION		SIGNIFICANT ADDITIONAL DESCRIPTIONS		
Number	Product or Service from List B	Number List B	Number List B	Number List B
Number	Technology/Science from List C	Number List C	Number List C	Number List C
Number	Function from List D	Number List D	Number List D	Number List D
Number	Supervisory Responsibility from List E	List "Additional Descriptions" for significant qualifications only; otherwise leave blank.		

See enclosed lists for individual entries and example.

17. Based on your academic training and total work experience, describe your greatest competence profile showing the interdependence of area of technology or science, product or service, and function. If your greatest competence is the same as your PRESENT EMPLOYMENT PROFILE, check here ☐; if not, complete this profile.

GREATEST COMPETENCE PROFILE				
PRIMARY DESCRIPTION		SIGNIFICANT ADDITIONAL DESCRIPTIONS		
Number	Product or Service from List B	Number List B	Number List B	Number List B
Number	Technology/Science from List C	Number List C	Number List C	Number List C
Number	Function from List D	Number List D	Number List D	Number List D

## LANGUAGE AND AREA KNOWLEDGES:

18. FOREIGN LANGUAGE: List the languages (other than English) in which you have competence and indicate with a check mark (✓) your proficiencies. If you have no foreign language competence, check here. ☐

NAME OF LANGUAGE(S)	PROFICIENCY									
	CAN PREPARE AND DELIVER LECTURES		CAN CONVERSE		HAVE FACILITY TO TRANSLATE TECHNICAL JOURNALS		CAN READ TECHNICAL ARTICLES FOR OWN USE		SOME KNOWLEDGE BUT CAN'T USE AS A MEDIUM OF COMMUNICATION	
	EASILY 1	WITH DIFFICULTY 2	FLUENTLY 3	PASSABLY 4	INTO ENGLISH 5	FROM ENGLISH 6	EASILY 7	WITH DIFFICULTY 8	9	

19. AREA KNOWLEDGE: List the foreign countries or areas with which you are familiar by residence or professional specialization.

COUNTRY OR AREA	TOTAL YEARS RESIDENCE OR SPECIALIZATION	YEAR LAST VISITED OR SPECIALIZED	NATURE OF YOUR KNOWLEDGE OR SPECIALIZATION

NAME (Last, First, Middle Initial) SIGNATURE (Print Name)

10

# ENGINEERS JOINT COUNCIL

346 EAST 47TH STREET, NEW YORK, N. Y. 10017  
(212) 762-8800

NATIONAL ENGINEERS REGISTER

June, 1969

Dear Engineering Society Member:

Your name was picked at random from your engineering society's membership list as part of a sample of 100,000 engineers to be surveyed by Engineers Joint Council. The purpose of this survey, the third since 1964, is to provide current information on the nation's vital supply of engineering talent for the National Register of Scientific and Technical Personnel. EJC operates the National Engineers Register under contract with the National Science Foundation as one of its activities on behalf of the engineering profession.

In order to insure individual privacy, information you provide is considered privileged and is never released for commercial purposes. Only summary statistics are published. The Register also provides a means for locating qualified persons in event of urgent national needs. Engineers Joint Council's operation of this project assures that both national and professional interests are served in all uses of National Engineers Register data.

You may have participated in previous NER surveys. If so, you will note that this year's form has been improved and simplified. However, the changes have made it necessary that we ask you to fill out the entire form anew, even though some information may not have changed since the last survey. In any event, you will find that the form can be completed in about 15 minutes. Please answer the questions fully and accurately. Even if you do not consider yourself an engineer, or are no longer active, it is important that you return the form with all appropriate information filled in. This will also save us from mailing you follow-up questionnaires.

In the unlikely case that you receive duplicate forms, this is probably due to variations in your name or address in the records of the different societies to which you belong. We hope you will excuse any such duplication. Please complete one form, but return both to us so we can clear our records.

A postpaid envelope is enclosed for your convenience in replying. Engineers Joint Council and the societies cooperating in this project appreciate your assistance.

leged and is never released for commercial purposes. Only summary statistics are published. The Register also provides a means for locating qualified persons in event of urgent national needs. Engineers Joint Council's operation of this project assures that both national and professional interests are served in all uses of National Engineers Register data.

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In the unlikely case that you receive duplicate forms, this is probably due to variations in your name or address in the records of the different societies to which you belong. We hope you will excuse any such duplication. Please complete one form, but return both to us so we can clear our records.

A postpaid envelope is enclosed for your convenience in replying. Engineers Joint Council and the societies cooperating in this project appreciate your assistance in providing information of importance to the engineering profession.

Sincerely,

*John D. Alden*

John D. Alden  
Director  
National Engineers Register

Enclosures



... TO ADVANCE THE ART AND SCIENCE OF ENGINEERING IN THE PUBLIC INTEREST



BUDGET BUREAU NO. 88-03002  
APPROVAL EXPIRES FEBRUARY 1971

# LISTS OF ENGINEERING CURRICULA, PRODUCTS OR SERVICES, AREAS OF TECHNOLOGY AND SCIENCE, FUNCTIONS AND SUPERVISORY RESPONSIBILITIES

FOR USE WITH  
NATIONAL ENGINEERS REGISTER  
CONDUCTED BY THE  
ENGINEERS JOINT COUNCIL  
345 EAST 47TH STREET, NEW YORK, N. Y., 10017  
AND THE NATIONAL SCIENCE FOUNDATION

## List A. Curricula to Be Used with Question 7.

Select from this list the appropriate number and curriculum title to describe your educational background for reporting in question 7.

- |                                   |                            |                                    |
|-----------------------------------|----------------------------|------------------------------------|
| 1. Aeronautical and Astronautical | 14. Engineering Physics    | 27. Naval Architecture             |
| 2. Agricultural                   | 15. Engineering Science    | 28. Nuclear                        |
| 3. Architectural                  | 16. Engineering Technology | 29. Petroleum                      |
| 4. Bioengineering                 | 17. Environmental          | 30. Sanitary                       |
| 5. Ceramic                        | 18. Geological             | 31. Textile                        |
| 6. Chemical                       | 19. Geophysical            | 32. Transportation                 |
| 7. Civil                          | 20. Industrial             | 33. Welding                        |
| 8. Communications                 | 21. Marine                 | 90. Other Engineering (specify)    |
| 9. Construction                   | 22. Materials              | 34. Business Administration        |
| 10. Electrical                    | 23. Mechanical             | 35. Chemistry                      |
| 11. Electronic                    | 24. Metallurgical          | 36. Physics                        |
| 12. Engineering Mechanics         | 25. Mineral                | 99. Other Nonengineering (specify) |
| 13. Engineering General           | 26. Mining                 |                                    |

## EXAMPLE FOR COMPLETING QUESTION 16.

The work of most engineers is related, directly or indirectly, to the combination of some Product or Service, Area of Technology and Science, Function, and Supervisory Responsibility.

We have grouped Products and Services in List B, using both general and specific terms within related fields. Look over the major headings and find the field that most specifically fits your situation. If your field cuts across several Products or Services look for the most appropriate single general term, or specify one. List C, Areas of Technology and Science, is made up of terms that can apply to numerous Products or Services. Again, both general and specific terms are listed. List D, Functions, consists of terms describing work activities in which engineers engage. List E, Supervisory Responsibility provides a means by which you can indicate the level of your Supervisory Responsibility.

When you have looked over the Lists, choose one term from each List so that the combination best provides a description of your employment profile. If the listed terms are inadequate in your particular situation, you may write in your own words in the space provided. The following is an example of an employment profile showing the relationship among Product or Service, Areas of Technology and Science, Function, and Supervisory Responsibility.

**EXAMPLE:** An engineer is designing pumps, with particular attention to the selection of materials for specialized applications. He would therefore report his employment profile as consisting of 1123 "Pumps and Liquid Handling Equipment" as his Product or Service from List B, and no other Product or Service would be needed in the significant additional description column, "Areas of Technology and Science" from List C, and the primary description of Areas of Technology and Science from List C with additional descriptions from List D with additional descriptions from List E.



# EXAMPLE FOR COMPLETING QUESTION 16.

The work of most engineers is related, directly or indirectly, to the combination of some Product or Service, Area of Technology and Science, Function, and Supervisory Responsibility.

We have grouped Products and Services in List B, using both general and specific terms within related fields. Look over the major headings and find the field that most specifically fits your situation. If your field cuts across several Products or Services look for the most appropriate single general term, or specify one. List C, Areas of Technology and Science, is made up of terms that can apply to numerous Products or Services. Again, both general and specific terms are listed. List D, Functions, consists of terms describing work activities in which engineers engage. List E, Supervisory Responsibility provides a means by which you can indicate the level of your Supervisory Responsibility.

When you have looked over the Lists, choose one term from each List so that the combination best provides a description of your employment profile. If the listed terms are inadequate in your particular situation, you may write in your own words in the space provided. The following is an example of an employment profile showing the relationship among Product or Service, Area of Technology and Science, Function, and Supervisory Responsibility.

**EXAMPLE:** An engineer is designing pumps, with particular attention to the selection of materials for specialized applications or Service from List B, and no other Product or Service would be needed in the significant additional description column; 102 "Material Applications" would be the primary description of Areas of Technology and Science from List C with additional descriptions 031 "Corrosion" and 061 "Fluid Dynamics"; his selection from List D, Functions, would be 05 "Design"; and his Supervisory Responsibility would be selected from List E, 1, "No regular supervision given."

PRESENT EMPLOYMENT PROFILE				
PRIMARY DESCRIPTION		SIGNIFICANT ADDITIONAL DESCRIPTIONS		
1123	Pumps and liquid-handling equipment	Number List A: 031	Number List B: 1061	Number List C: 061
N-102	Material applications			
Fun-05	Design	Number List D: 05		Number List E: 1
Sup-1	No regular supervision given			

Complete in a similar manner question 17, Profile of Greatest Competence, using Lists B, C, and D to provide the required description.

## List B. Products or Services for Use with Questions 16 and 17.

The following is a list of products or services for use with questions 16 and 17. Select from this list the appropriate number and product or service which applies to you.

### Agriculture and Food

0000 This field generally  
0001 Agricultural services  
0002 Animals  
0003 Distilled products  
0004 Fish products  
0005 Forestry  
0006 Food and beverage products  
0007 Natural fibers  
0008 Plants  
0009 Tobacco  
0010 Other (specify)  
**Aircraft and Space**  
0100 This field generally  
0101 Aeronautics (general)  
0102 Aircraft  
0103 Aircraft V/STOL  
0104 Aircraft engines  
0105 Aircraft parts and accessories  
0106 Aircraft services  
0107 Airlines  
0108 Astronautics (general)

### Ceramics

0109 Launch vehicles  
0110 Re-entry devices  
0111 Spacecraft  
0112 Spacecraft engines  
0113 Spacecraft parts and accessories  
0114 Spacecraft services  
0115 Other (specify)  
**Chemicals and Allied Products**  
0200 This field generally  
0201 Abrasives  
0202 Cement, concrete, and gypsum products  
0203 Clay products  
0204 Glass products  
0205 Insulation materials (thermal)  
0206 Refractories  
0207 Services related to ceramics  
0208 Other (specify)

### Chemicals and Allied Products

0300 This field generally  
0301 Agricultural chemicals  
0302 Carbon products  
0303 Chemical services  
0304 Cosmetics  
0305 Drugs and pharmaceuticals  
0306 Dyes and organic pigments  
0307 Elastomers  
0308 Explosives  
0309 Fermentation products  
0310 Fertilizer  
0311 Gases  
0312 Industrial chemicals (general)  
0313 Inorganics  
0314 Nuclear and radioactive materials  
0315 Organics  
0316 Paints and coatings  
0317 Petrochemicals  
0318 Photographic chemicals  
0319 Plastics and synthetic polymers  
0320 Propellants  
0321 Soap and detergents  
0322 Synthetic fibers  
0323 Other (specify)

## Communications

- 0400 This field generally
- 0401 Broadcasting
- 0402 Cable television
- 0403 Communication services
- 0404 Motion pictures
- 0405 Telegraph
- 0406 Telephone
- 0407 Other (specify)

(Also see Electrical and Electronics fields)

## Computers

- 0500 This field generally
- 0501 Analog equipment
- 0502 Components and parts
- 0503 Computer services
- 0504 Digital equipment
- 0505 Hybrid equipment
- 0506 Memory units
- 0507 Optical equipment
- 0508 Peripheral equipment
- 0509 Software
- 0510 Other (specify)

## Construction and Civil Engineering

- 0600 This field generally
- 0601 Airports and facilities
- 0602 Architecture
- 0603 Bridges
- 0604 Buildings and structures (general)
- 0605 City, regional, and urban planning
- 0606 Civil plants and facilities
- 0607 Construction services
- 0608 Dams and water control structures
- 0609 Excavation and foundation
- 0610 Heavy construction (general)
- 0611 Highways
- 0612 Hydro-electric facilities
- 0613 Industrial plants and facilities
- 0614 Landscaping
- 0615 Military construction (not elsewhere classified)
- 0616 Prefabricated construction
- 0617 Public works (general)
- 0618 Recreational facilities
- 0619 Rivers and harbors
- 0620 Sanitary facilities
- 0621 Spacecraft and missile facilities
- 0622 Surveying and mapping
- 0623 Thin-shell construction
- 0624 Tunneling
- 0625 Water supply and treatment
- 0626 Other (specify)

## Educational and Information Services

- 0700 This field generally
- 0701 Engineering instruction
- 0702 Information services
- 0703 Libraries
- 0704 Technical instruction
- 0705 Other (specify)

## Electrical Equipment and Services

- 0800 This field generally
- 0801 Business and office equipment
- 0802 Components and accessories
- 0803 Controls
- 0804 Electrical services
- 0805 Household appliances
- 0806 Industrial electrical equipment (general)
- 0807 Instruments and test equipment
- 0808 Insulated conductors
- 0809 Lighting and wiring
- 0810 Magnetic devices

## Metal Fabricated Products

- 1500 This field generally
- 1501 Boilers
- 1502 Cans and containers
- 1503 Electroplated and coated products
- 1504 Hardware
- 1505 Machined or turned products
- 1506 Metal fabrication services
- 1507 Pipe, fittings, and valves
- 1508 Pressure vessels
- 1509 Sheet metal products
- 1510 Stampings
- 1511 Structural steel products
- 1512 Weldments
- 1513 Wire products
- 1514 Other (specify)

## Mining

- 1600 This field generally
- 1601 Coal
- 1602 Iron ores
- 1603 Mining services
- 1604 Non-ferrous metal ores
- 1605 Non-metallic minerals
- 1606 Quarry products
- 1607 Sulfur
- 1608 Uranium and radioactive ores
- 1609 Other (specify)

## Motor Vehicle Transportation

- 1700 This field generally
- 1701 Automobiles
- 1702 Buses, trucks, and trailers
- 1703 Engines
- 1704 Motorcycles, etc.
- 1705 Motor transportation services
- 1706 Parts and accessories
- 1707 Other (specify)

## Ordnance

- 1800 This field generally
- 1801 Ammunition
- 1802 Fire control equipment
- 1803 Guided missiles
- 1804 Guns
- 1805 Ordnance services
- 1806 Small arms
- 1807 Tanks
- 1808 Other (specify)

## Petroleum

- 1900 This field generally
- 1901 Asphalt materials
- 1902 Crude petroleum
- 1903 Gas pipelines
- 1904 Liquefied gas
- 1905 Lubricating oil and grease
- 1906 Natural gas
- 1907 Oilfield services
- 1908 Oil pipelines
- 1909 Refining products
- 1910 Reservoirs (oil and gas)
- 1911 Other (specify)

## Railway and Rapid Transit

- 2000 This field generally
- 2001 Railroad equipment
- 2002 Railroad transportation
- 2003 Railway services
- 2004 Rapid transit
- 2005 Other (specify)

## Utilities

- 2100 This field generally
- 2101 Electric utilities
- 2102 Electric and gas utilities (combination)

1707 Other (specify)

## Ordnance

- 1800 This field generally
- 1801 Ammunition
- 1802 Fire control equipment
- 1803 Guided missiles
- 1804 Guns
- 1805 Ordnance services
- 1806 Small arms
- 1807 Tanks
- 1808 Other (specify)

## Petroleum

- 1900 This field generally
- 1901 Asphalt materials
- 1902 Crude petroleum
- 1903 Gas pipelines
- 1904 Lubricated gas
- 1905 Lubricating oil and grease
- 1906 Natural gas
- 1907 Oilfield services
- 1908 Oil pipelines
- 1909 Refinery products
- 1910 Reservoirs (oil and gas)
- 1911 Other (specify)

## Railway and Rapid Transit

- 2000 This field generally
- 2001 Railroad equipment
- 2002 Railroad transportation
- 2003 Railway services
- 2004 Rapid transit
- 2005 Other (specify)

## Utilities

- 2100 This field generally
- 2101 Electric utilities
- 2102 Electric and gas utilities (combination)
- 2103 Gas utilities
- 2104 Sanitary services
- 2105 Sewerage, waste disposal services
- 2106 Water supply and treatment
- 2107 Other (specify)

## Other Products and Services

- 2201 Advertising and promotion
- 2202 Banking and finance
- 2203 Building maintenance
- 2204 Business forms
- 2205 Clothing
- 2206 Insurance
- 2207 Laboratory services
- 2208 Leather
- 2209 Lumber
- 2210 Paper
- 2211 Paper products
- 2212 Patents and legal services
- 2213 Personal services
- 2214 Printing and related services
- 2215 Pulp
- 2216 Regulatory services
- 2217 Retail trade services
- 2218 Rubber and fabricated products
- 2219 Textiles and textile products
- 2220 Tires
- 2221 Toys and amusements
- 2222 Wholesale trade services
- 2223 Wood products
- 2224 Other products (specify)
- 2225 Other service (specify)

- 1107 Farm machinery
- 1108 Food machinery
- 1109 Furnaces, heating equipment,ovens
- 1110 Gears
- 1112 Hydraulic machinery
- 1113 Industrial machinery and equipment (general)
- 1114 Internal combustion engines, (general)
- 1115 Machine tools and accessories
- 1116 Materials handling machinery
- 1117 Mining machinery
- 1118 Nuclear machinery
- 1119 Paper machinery
- 1120 Pneumatic equipment
- 1121 Power transmission equipment (mechanical)
- 1122 Printing and duplicating machinery
- 1123 Pumps and liquid handling equipment
- 1124 Refrigerating equipment
- 1125 Specialized industrial machinery
- 1126 Steam engines
- 1127 Textile machinery
- 1128 Turbines
- 1129 Vending and service machinery
- 1130 Other (specify)

## Marine Transportation

- 1200 This field generally
- 1201 Boats and small craft
- 1202 Inland waterway craft and services
- 1203 Marine auxiliaries
- 1204 Marine engines
- 1205 Merchant ships
- 1206 Naval architectural services
- 1207 Naval vessels
- 1208 Ocean transportation
- 1209 Port facilities and services
- 1210 Propellers and shafting
- 1211 Shipbuilding and repair services
- 1213 Underwater craft
- 1214 Other (specify)

## Medical and Health Services

- 1300 This field generally
- 1301 Artificial organs
- 1302 Medical and health care
- 1303 Medical and dental instruments
- 1304 Medical laboratory services
- 1305 Prosthetic devices
- 1306 Other (specify)

## Metals, Basic (except Mining)

- 1400 This field generally
- 1401 Aluminum
- 1402 Copper
- 1403 Electrometallurgical products
- 1404 Foundries (general)
- 1405 Iron and steel mills, foundries, and forges
- 1406 Lead and zinc
- 1407 Metallurgical products (special)
- 1408 Metallurgical services
- 1409 Non-ferrous smelting, refining, and processing
- 1410 Non-ferrous castings
- 1411 Radioactive metals
- 1412 Rare metals
- 1413 Refractory metals
- 1414 Other (specify)

- 0609 Excavation and foundation
- 0610 Heavy construction (general)
- 0611 Highways
- 0612 Hydro-electric facilities
- 0613 Industrial plants and facilities
- 0614 Landscaping
- 0615 Military construction (not elsewhere classified)
- 0616 Prefabricated construction
- 0617 Public works (general)
- 0618 Recreational facilities
- 0619 Rivers and harbors
- 0620 Sanitary facilities
- 0621 Spacecraft and missile facilities
- 0622 Surveying and mapping
- 0623 Thin-shell construction
- 0624 Tunneling
- 0625 Water supply and treatment
- 0626 Other (specify)

## Educational and Information Services

- 0700 This field generally
- 0701 Engineering instruction
- 0702 Information services
- 0703 Libraries
- 0704 Technical instruction
- 0705 Other (specify)

## Electrical Equipment and Services

- 0800 This field generally
- 0801 Business and office equipment
- 0802 Components and accessories
- 0803 Controls
- 0804 Electrical services
- 0805 Household appliances
- 0806 Industrial electrical equipment (general)
- 0807 Instruments and test equipment
- 0808 Insulated conductors
- 0809 Lighting and wiring
- 0810 Magnetic devices
- 0811 Power generation
- 0812 Rural electrification
- 0813 Storage batteries
- 0814 Switchgear
- 0815 Telephone equipment
- 0816 Transformers
- 0817 Transmission and distribution
- 0818 Welding apparatus
- 0819 Other (specify)

(Also see Communications and Utilities fields)

## Electronic Equipment and Services

- 0900 This field generally
- 0901 Antennas
- 0902 Audio
- 0903 Components and accessories
- 0904 Controls
- 0905 Electroacoustic transducers
- 0906 Electro-optical devices
- 0907 Electron tubes
- 0908 Electronic equipment generally
- 0909 Electronic services
- 0910 Instruments and test equipment
- 0911 Integrated circuits and components
- 0912 Lasers
- 0913 Microwave and radar
- 0914 Radio and TV receivers
- 0915 Radio and TV transmitters
- 0916 Recording
- 0917 Semiconductor devices

### List C. Areas of Technology and Science for Use with Questions 16 and 17.

The following is a list of areas of technology and science for use with questions 16 and 17. Please scan the entire list and select the appropriate number and area of technology or science which describes your specific professional competence.

- |   |  |  |
|---|--|--|
| 001 Acoustics, sonics                     | 068 Geodesy                                    | 134 Photoelectricity                   |
| 002 Adaptive systems                      | 069 Geology                                    | 135 Photogrammetry                     |
| 003 Aerodynamics                          | 070 Geophysics                                 | 136 Photography                        |
| 004 Air pollution                         | 071 Guidance, stability                        | 137 Physics                            |
| 005 Applied physics                       | 072 Health physics                             | 138 Physiology                         |
| 006 Aquaculture                           | 073 Heat transfer                              | 139 Plant and facilities engineering   |
| 007 Arrangement                           | 074 High pressure                              | 140 Plasmas                            |
| 008 Assembly methods                      | 075 High temperature                           | 141 Pollution                          |
| 009 Astronautics                          | 076 History (technological)                    | 142 Power, electrical                  |
| 010 Astronomy and astrophysics            | 077 Holography                                 | 143 Power, mechanical                  |
| 011 Atmospheric sciences, meteorology     | 078 Human factors                              | 144 Power, nuclear                     |
| 012 Automation, cybernetics               | 079 Hydraulics                                 | 145 Preserving                         |
| 013 Beneficiation, ore processing         | 080 Hydrodynamics                              | 146 Processes                          |
| 014 Biochemistry                          | 081 Hydrography                                | 147 Product engineering                |
| 015 Bioengineering                        | 082 Hydrology                                  | 148 Production methods                 |
| 016 Biological applications               | 083 Illumination, lighting                     | 149 Production planning and control    |
| 017 Biomechanics                          | 084 Industrial health                          | 150 Propulsion                         |
| 018 Bionics, medical electronics          | 085 Industrial engineering                     | 151 Psychology                         |
| 019 Casting                               | 086 Information retrieval                      | 152 Public health                      |
| 020 Chemical applications                 | 087 Information theory                         | 153 Public safety                      |
| 021 Circuits, networks                    | 088 Infra-red, radiometry                      | 154 Quality assurance                  |
| 022 Combustion, fuels                     | 089 Instrumentation                            | 155 Quality control                    |
| 023 Communication                         | 090 Insulation, electrical                     | 156 Radiation safety                   |
| 024 Computer applications                 | 091 Insulation, thermal                        | 157 Radioactivity                      |
| 025 Concrete technology                   | 092 Kinetics                                   | 158 Radio astronomy                    |
| 026 Configuration control                 | 093 Life support                               | 159 Radio frequency compatibility      |
| 027 Conservation, reclamation             | 094 Logic                                      | 160 Radiography, x-rays                |
| 028 Containerizing, packaging             | 095 Lubrication                                | 161 Recording                          |
| 029 Control (general)                     | 096 Magnetism, magnetism                       | 162 Refining                           |
| 030 Coating, plating, cladding            | 097 Magnetohydrodynamics                       | 163 Reliability                        |
| 031 Corrosion                             | 098 Maintainability, maintenance               | 164 Reprography                        |
| 032 Cost engineering                      | 099 Manufacturing technology                   | 165 Rock mechanics                     |
| 033 Cryogenics                            | 100 Marine sciences                            | 166 Safety engineering                 |
| 034 Crystals, crystallography             | 101 Mass transfer                              | 167 Sanitary engineering               |
| 035 Data processing                       | 102 Material applications                      | 168 Servo-mechanisms                   |
| 036 Desalting                             | 103 Material handling                          | 169 Size reduction                     |
| 037 Dielectrics                           | 104 Material properties                        | 170 Soils                              |
| 038 Display                               | 105 Mathematics                                | 171 Solid state                        |
| 039 Drafting, drawing, graphic technology | 106 Measurement, metrology                     | 172 Solid waste                        |
| 040 Drainage, irrigation                  | 107 Mechanical applications, applied mechanics | 173 Specifications, standards          |
| 041 Drilling                              | 108 Mechanical engineering                     | 174 Statistics                         |
| 042 Drying                                | 109 Mechanical engineering                     | 175 Stress analysis                    |
| 043 Earth sciences                        | 110 Mechanics                                  | 176 Structures                         |
| 044 Economics                             | 111 Medical applications                       | 177 Superconductivity                  |
| 045 Educational technology                | 112 Metallurgy (general)                       | 178 Surveying, mapping technology      |
| 046 Electrical applications               | 113 Metallurgy, extractive                     | 179 Systems engineering                |
| 047 Electrical engineering                | 114 Metallurgy, physical                       | 180 Telecommunications                 |
| 048 Electrochemistry                      | 115 Metallurgy, powder                         | 181 Telemetry                          |
| 049 Electromagnetic radiation             | 116 Metallurgy, process                        | 182 Testing-environmental, operational |
| 050 Electromechanical technology          | 117 Military applications                      | 183 Testing-laboratory                 |
| 051 Electronic applications               | 118 Minimization                               | 184 Thermodynamics                     |
| 052 Energy generation and conversion      | 119 Mining, surface                            | 185 Thermodynamics                     |
| 053 Engineering                           | 120 Mining, underground                        | 186 Thermophysics                      |
| 054 Environmental control                 | 121 Mining, underwater                         | 187 Tooling, tools                     |
| 055 Environmental factors                 | 122 Motion and time study                      | 188 Traffic                            |
| 056 Equipment facilities                  | 123 Navigation                                 | 189 Transportation                     |
| 057 Explosive effects                     | 124 Neural nets                                | 190 Ultrasonics                        |
| 058 Fastening, joining                    | 125 Noise reduction                            | 191 Underwater acoustics               |
|   | 126 Nondestructive tests                       | 192 Underwater technology              |
|   | 127 Nuclear engineering                        | 193 Vacuum technology                  |

- 021 Circuits, networks  
022 Combustion, fuels  
023 Communication  
024 Computer applications  
025 Concrete technology  
026 Configuration control  
027 Conservation, reclamation  
028 Containerizing, packaging  
029 Control (general)  
030 Control, plating, cladding  
031 Corrosion  
032 Cost engineering  
033 Cryogenics  
034 Crystals, crystallography  
035 Data processing  
036 Desalting  
037 Dielectrics  
038 Drafting  
039 Drafting, drawing, graphic technology  
040 Drainage, irrigation  
041 Drilling  
042 Drying  
043 Earth sciences  
044 Economics  
045 Educational technology  
046 Electrical applications  
047 Electrical engineering  
048 Electrochemistry  
049 Electromagnetic radiation  
050 Electromechanical technology  
051 Electronic applications  
052 Energy generation and conversion  
053 Engineering  
054 Environmental control  
055 Environmental factors  
056 Equipment facilities  
057 Explosive effects  
058 Filament technology  
059 Fire prevention and protection  
060 Fluid dynamics, fluid mechanics  
061 Fluids  
062 Fracture, shaping  
063 Friction  
064 Friction  
065 Fuel cells  
066 Gas dynamics  
067 Geochemistry  
068 Infra-red, radiometry  
069 Instrumentation  
090 Insulation, electrical  
091 Insulation, thermal  
092 Kinetics  
093 Life support  
094 Logic  
095 Lubrication  
096 Magnetics, magnetism  
097 Magnetohydrodynamics  
098 Maintainability, maintenance  
099 Manufacturing technology  
100 Marine sciences  
101 Mass transfer  
102 Material applications  
103 Material handling  
104 Material properties  
105 Mathematics  
106 Measurement, metrology  
107 Mechanical applications, applied  
108 Mechanical engineering  
109 Mechanics  
110 Medical applications  
111 Medical technology  
112 Metallurgy (general)  
113 Metallurgy, extractive  
114 Metallurgy, physical  
115 Metallurgy, powder  
116 Metallurgy, process  
117 Military applications  
118 Miniaturization  
119 Mining, surface  
120 Mining, underground  
121 Mining, underwater  
122 Motion and time study  
123 Navigation  
124 Neural nets  
125 Noise reduction  
126 Nondestructive tests  
127 Nuclear engineering  
128 Nucleonics  
129 Oceanography  
130 Offshore operations  
131 Operating procedures  
132 Operations research, systems analysis  
133 Optics  
154 Quality assurance  
155 Quality control  
156 Radiation safety  
157 Radioactivity  
158 Radio astronomy  
159 Radio frequency compatibility  
160 Radiography, x-rays  
161 Recording  
162 Refining  
163 Reliability  
164 Reprography  
165 Rock mechanics  
166 Safety engineering  
167 Sanitary engineering  
168 Servo-mechanisms  
169 Size reduction  
170 Soils  
171 Solid state  
172 Solid waste  
173 Specifications, standards  
174 Statistics  
175 Structures  
176 Stress analysis  
177 Structures  
178 Surveying, mapping technology  
179 Systems engineering  
180 Telecommunications  
181 Telemetry  
182 Testing-environmental, operational  
183 Testing-laboratory  
184 Thermochemistry  
185 Thermodynamics  
186 Thermophysics  
187 Tooling, tools  
188 Traffic  
189 Transportation  
190 Ultrasonics  
191 Underwater acoustics  
192 Underwater technology  
193 Vacuum technology  
194 Value engineering  
195 Waste disposal  
196 Water pollution  
197 Water resources and supply  
198 Welding  
199 Work methods and simplification  
200 Other (specify)

## List D. Functions for Use with Questions 16 and 17.

The following is a list of work functions for use with questions 16 and 17. Select from this list the appropriate number and function you perform or supervise.

- 01 Advising, consultation  
02 Construction, installation  
03 Coordination, liaison  
04 Cost estimating, budgeting, procurement, purchasing  
05 Design  
06 Development  
07 Drafting, drawing, graphics  
08 Exploration  
09 Information and data processing, or technical writing  
10 Planning, directing  
11 Production, operations, maintenance  
12 Quality assurance and control, reliability  
13 Research  
14 Sales, technical services  
15 Specifying  
16 Teaching, instructing, training  
17 Testing, evaluation, inspection  
18 Other (specify)

## List E. Supervisory Responsibility for Use with Question 16.

The following is a list of supervisory responsibilities for use in question 16. Select from this list the appropriate number and term for use with your employment profile.

1. No regular supervision given
2. Indirect or staff supervision
3. Supervision of team or unit
4. Supervision of project or section
5. Management of major department, division, or program
6. General management of organization



## **ENGINEERS JOINT COUNCIL**

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American Society of Civil Engineers  
American Institute of Mining, Metallurgical and Petroleum Engineers  
American Society of Mechanical Engineers  
American Society for Engineering Education  
Society of Naval Architects and Marine Engineers  
American Society for Testing and Materials  
American Society of Agricultural Engineers  
American Institute of Consulting Engineers  
American Society for Metals  
Society of Manufacturing Engineers  
Society for Experimental Stress Analysis  
Instrument Society of America  
American Society for Quality Control  
American Institute of Industrial Engineers  
Society of Fire Protection Engineers  
American Institute of Plant Engineers  
American Association of Cost Engineers  
Society of American Military Engineers

### **ASSOCIATE SOCIETIES**

Air Pollution Control Association  
National Institute of Ceramic Engineers  
American Society for Nondestructive Testing  
Society of Packaging and Handling Engineers  
International Material Management Society  
Society for Women Engineers  
Society for the History of Technology  
Western Society of Engineers  
Michigan Engineering Society  
Louisiana Engineering Society  
North Carolina Society of Engineers  
Washington Society of Engineers  
Engineering Societies of New England  
South Carolina Society of Engineers  
Los Angeles Council of Engineers and Scientists  
Hartford Engineers Club  
International Material Management Society (New Jersey Chapter)  
Cleveland Engineering Society